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ABSTRACT

This state of the art review on career education focuses on describing the different career education purposes and programs that have emerged in the last few years of growth, examining the published reactions to these by educators and laymen, and proposing, for the consideration of the staff of the School Based Career Education Program of the National Institute of Education (NIE), a coherent and defensible set of purposes and programs which seem worthy of support. Five broadly stated purposes which might be included in national research and development on career education, and which resulted from a classification scheme for career education purposes, are discussed in detail. Briefly stated, these five purposes are matching people and jobs; awareness and capability for adult roles; diverse routes to publicly recognized masteries; comprehend, cope with, and influence the economic-social-political system; and acquire the means for self-support. Formulation of programs and their implementation with students is discussed in terms of factors that should be considered in developing career education programs, types of programs that can be developed, and examples of these various types. It is concluded that there is no single educational program in general or in career education in particular that is suitable on a priori grounds for all students in American schools, and that career educators should work on the assumption that dilemmas not resolvable in general for the whole country might be resolvable in particular localities. Included in the document is "A Practitioner's Guide to Formulating a Curriculum Development Proposal," developed by project staff. (TA)

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CAREER EDUCATION: THE STATE OF THE IDEA
AND ITS PROSPECTS FOR THE FUTURE

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Career Education Purposes and Programs

Prologue:

A movement for educational reform begins as the "property" of some minority of enthusiasts, grows as others hear about it and come to support it, and flowers, if at all, when enough educators embrace it and act on it. In explaining the reform to others, enthusiasts elaborate and articulate ideas embodied in it. What could pass unspoken between the like-minded must be spelled out for the stranger. Skeptics among the as yet uncommitted ask questions for which answers must be found. Practical people ask, "What do you want us to do?", pressing the enthusiasts to discover the implications of their ideas for practice. And so the reform movement makes its way from a dream shared by a few partisans to a public program for educational reform.

Career education is following this classic pattern. Originating in the late 60's as a concern for a neglected group of youngsters--those not enrolled in (or not suited for) either a college preparatory program or a vocational program in the secondary schools--and a neglected aim of education--preparation for vocation--on the part of a few widely scattered school administrators and vocational educators, career education was adopted by the Nixon administration under the leadership of then Commissioner Sidney P. Marland as top federal priority for education. At the time of its designation as official policy (1969), neither the term nor the idea was widely known outside vocational education circles and

among top level educational officials in Washington and in the states.

Those who devoted their time and energy to its cause were mainly concerned to get on with the work--to arouse enthusiasm among policy-makers and to develop policies, plans, programs, and teaching materials for career education--not to examine or criticize their ideas, or even to reach consensus among themselves. The result is that after several years of work there is little consensus among its supporters on what career education is or should be, and why it is needed. While there is rough agreement on broad principles and outlines, those who went off to build career education now find that their work has taken each of them in different directions and that, having maintained these directions for some years, the differences among them have become quite substantial.

This is the problem we have been asked to treat. The task assigned us was to describe the different career education purposes and programs that have emerged in the last few years of growth, to examine the published reactions to these by educators and laymen, and to propose for the consideration of the staff of the School Based Career Education Program of the NIE a coherent and defensible set of purposes and programs which seem more worthy of support than the remainder. This report is the fruit of our work on this task.

We are acutely aware, and we ask the reader to remain continuously aware, of the shaky foundation of fact and verified principle on which our conclusions rest. It is axiomatic that little will be known in any new area. Combine this with the equally obvious truth that educational reforms must be new to be reforms and you reach one of the great dilemmas of public policy for education: policy concerning educational reforms

must be made largely in ignorance. By the time the facts are in, the time for action usually has passed.

We have tried to spell out the arguments and the grounds for our judgments so that readers can decide for themselves whether they agree with us at each step along the way toward our recommendations. That way, if a reader disagrees at some point, it should be possible to follow the consequences of that disagreement forward into the final recommendations. Thus the reader can form his own judgments even when these differ from ours.

What We Found

The results of our investigation are contained in the first two parts of this Report. Part I deals with the purposes of career education; Part II deals with career education programs. What follows here is a brief statement of these results.

We found serious disagreement among proponents of career education concerning the purpose and direction of the reform movement. We also found serious opposition among outsiders to even those few matters on which proponents were agreed. None of the competing positions responded adequately to what seemed to us to be the legitimate claims of its competitors. Each seemed to build a program out of one or two ideas which, important as they might be, neglected other important ideas advanced with equal prominence by others.

When it became clear to us that we were not likely to find an adequately comprehensive program and rationale in the literature, we naturally tried to see if we could put one together from the many admirable partial ones we read. In Part I we present our version of an underlying consensus upon which most of the authors we read and probably a majority of the public would be able to agree.

But this consensus is not fully satisfactory, either. In spite of our best efforts, it remains in some respects a broad, abstract umbrella under which otherwise hostile positions can be found artificially united, rather than a true consensus. It, too, is less comprehensive than we would like. Some important purposes and programs do not fit very comfortably under its umbrella. And, like all other career education programs,

it is subject to criticism, serious and important criticism, by those who consider the whole idea to be misguided.

No program of reform is without its faults, and few remain unified and coherent for long. But career education seems to us to be more ambiguous and more vulnerable to unanswerable criticisms than most educational reforms. We gradually came to the conclusion that career education is so ambiguous and so vulnerable to criticism because it sits astride so many fundamental dilemmas of our society. Our political ideals of individual freedom and independence are not fully compatible with the economic imperatives of efficiency and productivity, which require discipline, subordination of individual desires to the requirements of industry and hierarchical organization. In our political life one person carries one vote, but in our economic life it is money that talks. In our egalitarian ideology all people are created equal, but our housing patterns and our private attitudes reveal strict hierarchies of esteem allocated according to the occupation a person follows. We admire doctors more than plumbers, lawyers more than farmers, university professors more than truck drivers.

Most school programs can ignore these conflicts among our ideals and between our ideals and our practice. But any career education program is forced to take some stand on them. The preparation of youngsters for the world of work as it now stands can be criticized as capitulation to our present undemocratic economic system. On the other hand, criticizing the present system in public schools, even if this were politically possible, would be seen by many as rejection of the American way. Furthermore, how can we be sure that, with all its deviations from democratic theory our

present economic system is not the most democratic one possible at this time. Forced to take a stand on these issues, career educators make themselves vulnerable to criticism from the other side no matter what they do.

It may be, then, that a career education reform that would be widely supported is not possible. But at least one other possibility exists that is consistent with the divergencies we found. This is the possibility that different localities, facing different problems, with different economic, social, and political microenvironments may be able to work out for themselves individual patterns of career education that steer a safe course between the horns of these dilemmas as they manifest themselves in their own particular situations.

Our work on this report has convinced us that no single coherent career education program suitable for or acceptable to the whole country is possible now or in the near future. There are simply too many differences of fact and opinion among Americans concerning work and its relation to education and to the other facts of life for them to agree on a common educational program dealing with work. Therefore, we advise career educators to work on the assumption that dilemmas not resolvable in general for the whole country might be resolvable, though in different ways, in particular localities. In fact, they might not even appear in some localities. Therefore, it seems prudent to allow and encourage states and local school districts to work out their own patterns of career education, with guidance and supervision from federal agencies. We do not mean to imply that there can or should be no central direction -- intellectual or administrative -- to career education. Part I of our report outlines some purposes that we

think any career education program should speak to in some way. Rather, our position is that how these broad purposes are interpreted in detail, how they are related to one another, priorities among them, the precise manner in which they are pursued should be determined locally so that the purposes will be adapted to the particular situation. We believe that the purposes outlined in Part I are as concrete and precise as it is prudent to be without detailed knowledge of the particular features of the student, teacher, community, and material to be taught. With knowledge of these particulars it should be possible to formulate and defend more precisely spelled out programs and purposes.

Part I: Purposes

Our first step in identifying directions for career education was to search existing writing for statements of purpose. (See Appendix 1 for details of the search.) Each statement was transcribed onto a 3x5 card. Statements of similar purposes were grouped together and relationships were sought among the groups so formed. In this way a classification scheme for career education purposes gradually evolved. (See Appendix 2 for successive versions of these classification schemes.) We eventually identified 30 major categories of career education purposes stated in the literature. These are listed in Table 1.

Table 1.

Major Categories of Career Education Purposes

Purposes stated in terms of benefits to individuals; purposes deriving from:

Career concerns, per se

1. provide specific marketable skills
2. provide general work skills
3. encourage recognition and modification of personal characteristics relevant to work
4. provide perspective needed for wise choice of occupation for career planning
5. prepare for advanced occupation-related training

Table 1. (continued)

Citizen role as it bears on career concerns

6. awareness of role of different occupations in p.e.s. system
7. awareness of relations between government and the economy
8. awareness of debates and agreement concerning the possibilities and limitations of the work place as a locus for more than economic activities, for example, citizen-political activities, improving relations among social subgroups

Family roles as they bear on career concerns

9. awareness of role requirements of family membership, including especially
 - a) ability to plan, manage, allocate resources within the family so as to make it self-sufficient economically
 - b) ability to nurture valued personal qualities in family members
10. capabilities for fulfilling role requirements of family membership, including especially a) and b) above
11. mitigate age segregation of modern life

Student role as it bears on career concerns

12. increase motivation to study
13. ease transition from student role to adult work roles

Status as persons

14. positive self-image and attitudes toward self, especially as these are dependent on success in work and career
15. awareness of the dependence of self-image and feelings about self on development and use of personal competencies in work roles
16. availability of diverse routes to recognized and rewarded competence
17. sense of efficacy, of control over major conditions of work life

Table 1. (continued)

Purposes stated in terms of social benefits, purposes related to:

Improving the national economy

18. contribute to economic survival, economic growth, increased productivity ...
19. reduce unemployment
20. develop unused or underused human resources
21. maintain the work ethic
22. reduce expenditures for remedial social problems (e.g., welfare, unemployment, crime ...)

Improving the political/governmental system

23. reduce alienation and disaffection
24. retain leadership of the free world

Improving communities, neighborhoods, the society

25. combat crime, delinquency, drug abuse ...
26. reduce prejudice, discrimination in work life
27. reduce problems of transition to adulthood
28. remove invidious status distinctions among occupations
29. make the family unit economically viable
30. improve the school system

Purposes deriving from career concerns per se are the most frequently mentioned and emphasized. The brief quotations which follow express these purposes in their authors' own, frequently vivid, words.

1. Provide specific marketable skills:

All children and youth (should) leave school with sufficient skills to obtain employment, pursue further career training, or progress to higher levels of education.

(S.P. Marland, quoted in "Career Education Prognosis," Stanford Research Institute, 1971, p. 3)

Vocational educators say youth need specific job skills that reduce an employer's investment in training.

(Forward Plan, p. 123)

Some findings suggest that when youth perceive their activities as making a real contribution, whether in terms of the kind of task or the real need for it even if routine, the experience is more likely to be a constructive one.

(Coleman, Youth: Transition to Adulthood MANUSCRIPT, 1974, p. 26-27)

2. Provide general work skills:

General education for work should probably be aimed at enhancing the young person's reading comprehension, arithmetical skills, the ability to write and speak clearly, and the capacity for working closely with other people ... Typically, employers find that young workers who have "learned how to learn" can quickly master the specifics of most jobs.

(Work in America, 1973, p. 146)

Daily new processes of manufacturing, communication, construction, merchandizing and packaging eliminate skills and render craftsmen obsolete. In such a protean economy, a man or woman would do best to learn many skills, develop wide interests, and--above all--learn how to learn.

(Gus Tyler, "Career Education and Society's Imperatives," p. 176 in Marland (ed.), Essays on Career Education, 1973)

A strong effort should be made ... to deemphasize any specific skills training for particular occupations at the high school level, in favor of much more generalized training in technical and problem-solving skills and a basic education that is transferable to a broad range of occupations.

(David Rogers, p. 497 in Mathieson, Opening the Doors, 1973)

3. Encourage recognition and modification (where appropriate) of personal characteristics relevant to work:

Students also need self-knowledge. They need to be able to differentiate personal values and personal interests as these are related to personal strengths and weaknesses in the several manifestations of ability -- verbal, quantitative, scholastic. They need to be able to assess these elements of the self, incorporate their meaning into the self-concept, and relate the relevance of self-information to the choices with which they will be confronted.

(Edwin Herr, "Unifying an entire system of education around a career development scheme," p. 85 in Goldhammer and Taylor (eds.), Career Education: Perspective and Promise, 1972.)

... clarification of those aspects of the self--e.g., interests, capacities, values--which need development for a lifelong process of planning and decision-making. Within the individual must be fostered a conscious awareness that he does have a choice, he must be assisted to verbalize and make explicit those choices with which he is presented, and to translate these into action.

(ibid, p. 73)

Are people truly hired on the basis of training, skills, and ability to perform, or do employers actually prefer the attractive, well-dressed person who exhibits good manners, appropriate diction, and the ability to get on well with others? Schools may achieve greater success in easing the entry of students into the work place ... by emphasizing these personal aspects as well as skill and academic attainments.

(M. Rosenberg, "Career Education," p. 25)

4. Provide the perspective needed for wise choice of occupation and for career planning generally.

... through the schools some of the current unreal expectations about work that are held by young people can be dissipated, thus avoiding much of the disappointment and frustration they feel when they take their first jobs.

(Work in America, p. 145)

Students must learn about the occupational cultures they will be a part of for any particular career. The world of work ... is a lifestyle, a set of values and assumptions. It means membership in a group with its own customs and mores ... It will require direct experience in the setting of a particular career ...

(James P. Spradley, "Career Education in Cultural Perspective", p. 12 in Marland, Essays on Career Education)

... sensitivity to the following as sources of satisfaction, motivation, and dissatisfaction:

- opportunity for creative effort
- responsibility
- recognition
- accomplishment
- amount and type of interaction with others
- repetitiveness of tasks
- status
- wages
- the physical environment
- working hours
- failure and criticism

(Louise Keller, "Career Development: An Integrated Curriculum Approach", p. 202, in Goldhammer and Taylor, Career Education: Perspective and Promise.)

5. Prepare students for advanced occupation-related training.

(Career education) argues strongly for the provision of educational services to help retrain people throughout their lives, so that they do not have to suffer obsolescence. In this sense, career education allies itself with the concept of life-long education and relates it to the changing job opportunities a modern American is likely to face during the 40 years of a working life.

(Harold Howe II, "Sch ools and the World of Work", p. 55 in Social Education, 37:505-507, 539, 1973)

Above all ... (is) the delivery to students of basic skills and attitudes prerequisite to the successful use of extra-school or post-secondary occupational training.

(SRI, Career Education Prognosis, 1979, p. 37)

... Preparation for successful ... progress in an occupation of his or her choice and retraining or upgrading instruction throughout the worklife of the individual in keeping with his needs and abilities.

(Campbell, Institute for Educational Development, A Review of the Developmental Program Goals for the Comprehensive Career Education Model, p. 79; A Report on Two Conferences to the National Institute of Education, August 1973

Considerable differences of opinion are apparent between authors who give different emphasis to these five purposes. Specific work skills are justified on the basis of their tangible, immediate benefits and the absolute realism of the experience with the world of work that they make possible. But general work skills are said by many to be more useful in the long run especially in a rapidly changing economy. It is also argued that specific job skills can be learned on the job cheaply and easily by workers with good general work skills and that the jobs

for which high school youngsters can be specifically trained offer low pay, low status, and little chance for advancement. And anyway, some say, employers do not seek specific skills, but rather general traits such as responsibility, honesty, initiative, and the like. General work skills, on the other hand, can be criticized as a vague concept little different from the notion of general education which career education seeks to replace.

In addition to the tension between specific and general work skills, one also finds authors who downplay skills of any kind, giving precedence to the goal of helping to secure a better match between people and jobs through self-knowledge and awareness of the world of work. They argue that children need more information about work opportunities, about the demands and rewards of work, about the implications of job choices for their life-styles, and about themselves -- their capabilities, personalities, and potentialities. Armed with this, youngsters should be able to make their own career choices more wisely, including seeking out the training (specific or general) they need. These purposes (#3 and #4) receive most nearly unanimous support of all career education purposes, but some authors view them as less important than work skills. Also, some point to what they consider to be abuse by schools of personality testing, confidential records, and the like as confirming their fears of schools in a counseling role. Furthermore, they point out, in conveying 'information' about the world of work, the school runs a grave risk of propagandizing for an official view.

Thus, career educators disagree even on this most basic set of

career education purposes. The disagreements multiply as additional purposes are added until the overall impression created by writing on career education becomes one of utter chaos and confusion. The only hope for our finding order in such a situation lay in the possibility of finding deeper agreements hidden in the welter of apparently conflicting positions. And, therefore, we sought underlying accords that might be employed to justify preferences among these positions in terms of basic commitments shared by the parties to these disputes. To accomplish this we studied in detail the purposes and arguments (for and against) presented by all parties with the aim of identifying the underlying agreements. With these in hand, we were able to determine which purposes were more compatible with the central consensus underlying diverse positions on career education.

The Underlying Consensus: Ideals of Career Education

Certain ideals of education and ideals of existence seem to be shared by the great majority of writers on career education. Nearly all of the arguments they offer for the purposes and programs they propose appeal ultimately to one or more of these ideals. It need hardly be added that the ideals which we shall describe are not all those possessed by the authors, but only those which have a specific reference to Career Education as a new enterprise. Such educational ideals as proficiency in basic skills, preparation of the academically talented for college, preparation of those with clear occupational goals for their chosen occupations, etc. are left unstated.

Ideals of Existence Implied in Career Education Writing

1. An orderly, efficient, productive, healthy economic-social system.
2. Widespread, equitably distributed opportunity for material and social advancement within this system.
3. General support for and feelings of belongingness toward (not alienation from) this system.
4. A society in which individuals have as great as possible a sense of control over their lives, of potency in dealing with their institutions, and of the possibility of accomplishment not limited by arbitrary ascriptive characteristics.
5. A society which honors work-life, not above all other facets of life, but as a central part of modern life, and a source of great human satisfaction and, when something goes wrong, of disappointment, frustration, and despair.

Broad Ideals of Education Stated or Implied in Career Education Writing

1. Youngsters should know themselves--realities and potentialities--well enough to make wisely, decisions that affect their careers. They should be capable of continuing throughout their lives to learn more about themselves.
2. Youngsters should know the economic-social system well enough to be able to negotiate it successfully (e.g., in getting and holding a job, in career planning, etc.) and to influence it both individually and through organized efforts.

3. Youngsters should not experience such enormous problems as they now seem to in making the transition from youth to adulthood.
4. Society should make available to youngsters diverse routes to publicly noted achievement; compulsory schooling should not be a solely intellectual and academic affair.
5. Schooling should bring work-life more centrally into the symbolic and experienced world-view of modern life to which it exposes youngsters.

We believe that these broad ideals of existence and of education would receive nearly unanimous support from career education writers. Some would say that these statements do not go far enough to suit them; other ideals would certainly be proposed; and discussions of priorities and of specifics would be stormy. But these ideals are a foundation of agreement which can be used to judge how compatible other ideals are with the career education "concept". Furthermore, these ideals would surely find wide support among educators and laymen who have not yet heard of career education. Therefore, we have used these ideals as a major basis for our recommended directions for career education.

(Table 2 lists several ideals implicit or explicit in some career education writing, but which do not play as central a role in the full range of career education writing as those listed above.)

Table 2.

A selection of career education ideals which seem less central in career education writing than those identified in the text.

1. Career education should ensure that opportunities for continuing, adult, and recurrent education become widely available. (Laudable, but not specifically a concern of career education, certainly not of school-based career education.)
2. Career education should strive to remove invidious status distinctions among occupations. (Such distinctions may be functional. Anyway, what can career education do in the face of other influences--media, peer groups, home, etc.--reinforcing these distinctions?)
3. Career education should help make school a more pleasant, likeable, appealing place for all students. (Likeability is not the highest value schools can have. In any event, likeability is to be added to the distinctive purposes of career education, at best.)
4. Career education should strive to maintain and enhance the work ethic. (Vague. What is the work ethic? Is it declining? If so, can school help? Many of the other purposes we selected for high priority would contribute to respect for work when it is worthy of respect and to recognition of other facets of what some might call "the work ethic".)
5. Career education should seek to integrate schools and communities socially, economically, racially. (Certainly career education should offer equal educational opportunity regardless of these characteristics. To do otherwise would be illegal. But this purpose should be shared with all other facets of any educational program or reform. It is not a distinctive purpose of career education.)
6. Career education should help students develop a good self-image and sense of self-worth. (Not a distinctive goal of career education. Inasmuch as this purpose is accomplished by career related efforts, it is incorporated in other purposes we have recommended.)

Table 2. (continued)

7. Career education should help the U.S. keep up with foreign powers and maintain leadership of the western world. (At best career education could make a small and indirect contribution to this ideal; and this contribution would probably be made through the achievement of the other purposes recommended for high priority.)
8. Career education should reduce expenditures for social programs such as unemployment, welfare, crime prevention, etc. (This might be an indirect side-benefit of a good career education program, but the same purpose might be accomplished in other ways. Also, no education program has so far proved capable of counteracting the many causes of the problems which give rise to these programs, and it would be too much to ask career education to do so.)

In the course of discussions directed at discovering what career education purposes would be most compatible with these ideals, we found that we also needed to consider certain characteristics of the world--of schools, of communities--in order to appraise the purposes. For example, the aim of helping youngsters to earn the credentials demanded by employers sounds laudable. It also seems to be one way to help youngsters negotiate a critical part of the economic-social system. But it is necessary to recognize several realities:

- a. Labor unions, governmental agencies, industry associations, and the like, not schools, set and enforce the credentialling system. Thus, if schools help many youngsters qualify, they might find that the credentials have been changed to protect or advance the interests of those setting the requirements.

- b. Requirments for credentials are often irrational and arbitrary. Although such requirements have been successfully challenged in the courts, time will be required for actual practice to catch up with the law.

These realities do not necessarily mean that qualifying youngsters for credentials is not a worthy purpose for career education, but in order to determine their worthiness it is necessary to consider such realities.

For this reason we prepared a list of important realities of schools and communities that should be taken into account in appraising the worthiness of various career education purposes.

Realities of the U.S. in the 1970's

1. Technology and therefore the economy change so rapidly that skills are made obsolete and a tremendous demand for new skills created in time periods short enough that many workers may need to learn, use, and discard two or more difficult-to-acquire occupational preparations in their careers.
2. Serious and widespread but controlled conflict is apparent between those who favor relative independence between government and the economic system (free enterprise capitalism) and those who advocate some form of government control and supervision. This conflict has persisted over many decades and does not appear likely to be settled definitively in the foreseeable future.

3. Most people are dissatisfied with their jobs and careers in one or more major respects.
4. Except through labor unions and collective bargaining, workers have little control over their conditions of work, though occupations differ in this regard, and this situation may be changing.
5. The institutional structure of our economic-social system has grown increasingly complex, and consequently imposes severe demands on persons to play complex and finely differentiated roles.
6. As of the late 1960's there is widespread, serious concern about the long-range health and well-being of the national economy.
7. A number of persuasive current analyses suggest that schools have not been as effective as social-economic equalizers as former generations had hoped they might be.
8. Our society still exhibits differences in social and economic advantages dependent on race, religion, ethnic group, and parental social-economic status.
9. A welter of laws, regulations, and customs conspire to prevent youngsters before age 16-18 from entering the labor force in great numbers.

Some Important Realities of Public Schools in the U.S. of the 1970's

1. Universal, compulsory, free public education in comprehensive schools enjoys strong support from nearly all quarters of the society.

2. Due to declining school populations and to a recent history of faster-than-usual rises in school expenditures and, therefore, taxes, school budgets are likely to decline or at best maintain present levels for the foreseeable future.
3. Secondary school teachers are generally affiliated with an academic subject and reluctant to alter what they consider its structure of knowledge.
4. Teachers are oriented primarily toward verbal-symbolic materials and are not familiar with the world of work outside the school system.
5. Laws, regulations, customs, and even architecture conspire to keep youngsters on school grounds during school hours, i.e., extramural activities are disparaged as parts of the curriculum.
6. The public demands that schools provide some youngsters, at least, with the prerequisites for admission to college. An increasingly greater percentage of students has taken this route over the last few decades.
7. Comprehensive secondary schools contain a vocational unit which has lower status generally speaking than the academic unit, but whose representatives appear to be extremely influential with state legislatures and the Congress. Traditionally vocational education has been given and has accepted the full responsibility for direct career preparation in secondary schools.

8. Public schools are seldom permitted by their constituents to treat controversial issues. When public opinion is changing on some controversial issue, public acceptance for a new but controversial position lags behind private acceptance, with the result that schools, as public institutions, are usually constrained to present the traditional view even when a majority of the public no longer holds this view.
9. Parents and the general public generally demand more attention to discipline from the school than schoolpeople are providing. In other words, the public would support more tightly disciplined schooling.
10. The curriculum is already overloaded and it is difficult to discard existing subjects.

Priorities Among Career Education Purposes

When the purposes listed in Table 1 are examined in light of the ideals and realities just presented, some purposes seem more desirable than others. The following five broadly stated purposes seem to us to be more defensible in this light than the remainder, and therefore seem prime candidates for inclusion in national research and development on career education.

1. Career education should help secure a better match between people's characteristics and desires, and the career opportunities available. (This includes purposes #3 and #4 in Table 1.)

There are many jobs unfilled because of the dearth of qualified personnel; at the same time, many American young people are unemployed, because they lack the skills needed for the jobs available. To eliminate this paradoxical situation, it will be necessary to set up scientific methods of assisting each young person to select a life's goal which gives him a reasonable chance to succeed and earn a livelihood.

(Morris Shapiro, "The Urban Dropout and the World of Work," p. 80 in Marland, Essays on Career Education.)

... career education seeks to reduce the gap between educational outcome and the job needs of our technological society, with particular concern for the less advantaged and the alienated young.

(M. Rosenberg, "Career Education"

2. Career education should help youngsters develop awareness of adult roles and capabilities for fulfilling the requirements of those roles. (This includes purposes #9, #10, #13, and #19 in Table 1.)

Our society ... prolongs dependency through extensive compulsory schooling and other legal forms and then expects a quick transition at some point to adult work, family and citizenship roles.

(Coleman, Youth: Transition to Adulthood, p. 2-6-27/28)

Two major aspects of developing into adulthood in our society are moving from a childlike emotional dependence on parents to a mature form of interdependence with others and acquiring a sense of self-regulation and direction.

(ibid, p. 2-6-27)

... modern work has destroyed the easy awareness of their parental occupations that children had in more traditional societies.

(Work in America, p. 144)

3. Career education should enable compulsory public schooling to provide more diverse routes to recognized and rewarded masteries in school. (This includes purposes #16 in Table 1.)

Career education can become the instrument that stimulates a kind of education program ... in which every pupil can succeed.

(John W. Letson, "The Potential of Career Education", p. 100 in Marland, Essays on Career Education)

"Greeting his pupils, the master asked:
What would you learn of me?
And the reply came:
How shall we care for our bodies?
How shall we rear our children?
How shall we work together?
How shall we live with our fellowmen?
How shall we play?
For what ends shall we live?
And the teacher pondered these words,
And sorrow was in his heart.
For his own
Learning touched not these things"

(J. Crosby Chapman and George S. Counts, Jr., 1924, quoted in Halverson, "Is Career Education a Passing Fancy?" Some Thoughts of a Curriculum Generalist, Journal of Teacher Education, 24:2, pp. 110-12, Summer 1973.

Small wonder so many drop out, not because they have failed, but because we have failed them. Who would not at the earliest convenient and legal moment leave an environment that is neither satisfying, entertaining, nor productive?

(Sidney P. Maryland, "Career Education Now!" in K. Goldhammer & Robert Taylor, Career Education: Perspective and Promise, 1972, pp. 33-42.

4. Career education should help youngsters to comprehend, learn to cope with, and influence the economic-political-social

system in which they live, both in the aggregate and as it affects them individually. (This includes purposes #7, #8, #17 in their entirety and parts of others.)

(Local school superintendents) noted that Economic Awareness should be accompanied by an awareness of the socio-political aspects of the social system...

(Institute for Educational Development.
A Review of the Developmental Program
Goals for the Comprehensive Career
Education Model, August 1973.

Every individual needs to have skills, knowledge and understandings essential for conducting his affairs within his community and in relationship to his fellow men effectively. This goal implies that the individual will have extensive knowledge about social organizations and social processes and the skills which are necessary for him to work with both.

(Keith Goldhammer, "A Career Curriculum",
p. 128, in Goldhammer and Taylor (eds.),
Career Education: Perspective and Promise)

Compared with 50 years ago, there are fewer, larger, and more complex units of government for today's citizen to understand. The rural-urban shift has brought a proliferation of zoning cases. How can people understand them? Students are voting at age 18. They know about George Washington and the Incas of Peru, but do they know how their city council or school board works?

(Dale Parnell, "Career Education and the
School Curriculum", p. 109 in Marland,
Essays on Career Education)

5. Career education should provide students in secondary school with the opportunity to acquire skill and knowledge needed to support themselves honorably when they leave school. (This purpose includes #1 and #2 in Table 1.)

The secondary school can prepare the young person for the transition from dependency to self-support.

(Work in America, p. 145)

(to) prepare ... for self-sufficiency and entry into adult life .
(is a major purpose of career education).

(Rand, Career Education R&D Plan, p. 28)

Rationale for High Priority Selections

1. Matching people and jobs:

The importance of work and occupation in the lives of persons in modern societies is being recognized increasingly by scholars and practical people in a variety of fields. The following quotations illustrate this recognition by writers on career education.

For most males occupation also sets most aspects of life style for self, spouse, and offspring -- characteristics of spouse, marriage and family pattern, income and what it buys, status in the community, satisfactions of personal drives and needs, recreational outlets, conversational style, dress, place of residence, associations with friends, relatives, and acquaintances and their continuity or discontinuity, political and social attitudes, goals, and ideals.

(Coleman, Youth: Transition to Adulthood,
p. 2-6-17)

Work satisfaction, security, and success play important roles in the mental health of our children and youth. Work continues to be a central part in a man's--and increasingly a woman's--sense of personal identity, significance, and status.

(Report of the Joint Commission on
Mental Health of Children, 1969.)

... work plays a crucial and perhaps unparalleled psychological role in the formation of self-esteem, identity, and a sense of order.

(Work in America, p. 4)

Job satisfaction is in large part a result of felicitous matches between the demands and opportunities of the occupation (and the training required for it) and the characteristics of the job-holder. Both are susceptible to mutual adjustment within limits, but beyond these limits happiness in work is contingent upon making a good match. If career education can help people make better matches, it will have made an important contribution to individual and national well-being.

Ideally, people would not waste great amounts of time and energy (in some cases their entire working lives) pursuing a career that they might have realized early was not suited to them psychologically, physically, or emotionally. Youngsters would develop realistic aspirations and continually adjust them so as to be neither disheartened by the discovery that their career aspirations are almost impossible to attain nor disappointed later in life to find that they might have had a more fulfilling career had they worked at it steadily. Employers would benefit if workers needed less time to discover their true interests and capabilities. Youngsters would gain in opportunities to develop an identity that includes vocational as well as other roles.

There are dangers in pursuing this purpose. One is that a system might evolve which counseled or assigned youngsters to occupation or occupational-training slots on the basis of widely accepted stereotypes of job requirements in the form of abstract personal characteristics such as test scores. This sort of big-brotherism would be inconsistent with traditional American emphasis on individual freedom and independence. But used in conjunction with opportunities for youngsters to "try on" tentative vocational choices, such devices should not be objectionable. In fact,

as Coleman put it, "several recent studies have found that the (occupationally) experienced find their vocational choices more satisfactory than do the inexperienced." (Transition to Adulthood, p. 2-6-25)

Another danger is that students may be pressed to make important and irreversible occupational decisions too early, before their sense of identity is sufficiently established to permit an intelligent choice to be made. No doubt some people are ready for such choices in junior high school while other may grow old and still be unready, so perfection is not possible here. What is required is a delicate judgment about the mode--are most students able to undertake some career exploration in their school years?--and about the extent to which proposed plans can be changed to cope with exceptions. There is evidence to indicate that in the elementary school years, youngsters' occupational aspirations are egocentric and suffused with fantasy -- hardly a reliable basis for career choice. This appears to be at least harmless, if not a healthy means of imaginatively "trying on" the widest possible range of mature roles. So the emphasis during these early years should probably be on providing more experiential "food" for imagination and thought. In secondary school most youngsters seem capable of bringing their fantasies face-to-face with some realities, at least, and by the final two years of secondary school all youngsters face pressures to make occupation-related decisions that the school can do nothing to mitigate. Therefore, it seems imperative that this purpose be seriously addressed in the secondary school years. Modern occupational structures are so complex and the opportunities for exploration of them so limited that students' family and friends can introduce them to, at best, a small fraction of the options available.

Some agency must perform this function. The school can be modified to do so, though other institutions for youth could be devised specifically for this purpose.

A third danger in pursuing this purpose is that schools might try to teach about job choices in an abstract way. At best such an academic approach would be insufficient for all and repellent to many. But the purpose need not be pursued in this overly pedantic fashion, and safeguards against this are possible.

Achievement of this purpose will require that at least the following three goals be pursued:

- a. Youngsters must be provided with accurate, comprehensive, up-to-date information about job availability, job requirements, and job prospects in all sectors of the economy.
- b. Youngsters must be provided with experience, information, and counseling to orient them to the world of work and career planning, including provision of ways to discover and explore their own aptitudes, interests, and other personal characteristics related to a career.
- c. Youngsters must be provided with opportunities to learn about, experience, and "try on" different occupations in various ways under circumstances where shopping around is not penalized.

2. Awareness and capability for adult roles.

Young people need to know at first hand what it takes to function as an adult and to be recognized as an adult in their society. They also need to have a reasonable expectation of developing these capabilities. In an earlier and simpler age young people were exposed to a wide variety of adults functioning in a range of roles at home. But with the decline of the extended family and the placement of work in specialized settings away from the home, youngsters have been segregated from adults and denied opportunities to become acquainted with and practice adult roles. They naturally turn to their peer group for the satisfactions denied them in association with adults,^{thus} creating distinctive peer cultures and making the transition to adulthood still more difficult.

What is needed is a way to enlarge students' contacts and experience with adults in a variety of roles, including work roles, and ways for youngsters to try on those roles in circumstances where the inevitable early failures will not be damaging. For many students the opportunity to assume responsibility, to exercise initiative, and to develop parts of their personalities little stimulated in the student role, may mean that they will be saved from crime, drug abuse, or other forms of dropping out of society. All youngsters should gain greater understanding of the ways work-life affects life style and a more realistic basis for making their own career decisions.

Career education can help with this purpose in a number of ways, which can be usefully classified into two types. One type takes youngsters from the school grounds out into the community and the workplace

through work-experience programs or other sorts of programs. The other type brings those who work in the community into the schools in substantial, not merely ceremonial roles, such as co-teacher of a course or exchange teacher, allowing the regular teacher to gain experience with the world of work.

Some cautions: adulthood is more than work-life. It is also parenthood; it is full responsibilities of citizenship; it is wider participation in the life of the community and neighborhood. Career education programs must not explicitly claim or implicitly assume that easing the transition from school to work is the same thing as easing the transition from youth to adulthood.

There is grave danger that students will^{be} presented with a one-dimensional stereotype of adulthood that reflects what the majority or the leading members of society believe adulthood to be. Adulthood could even be pictured as what middle-class, white Anglo-Saxon Protestants take it to be, with no recognition that other social, ethnic, religious, and economic groups have a somewhat different conception. Career education programs must reflect multiple conceptions of adulthood corresponding to conceptions to be found in the society served by the schools.

There is also serious danger that present career patterns--real or ideal--will be elevated to the status of timeless patterns when in fact they may change substantially within a few years. Two or three different occupations may be the mode in this generation, rather than one lifetime occupation. Vesting of pensions and other developments freeing the worker from a particular firm may increase mobility markedly in some

occupations. Career education programs must beware of presenting existing patterns as fixed necessities.

3. Diverse routes to publicly recognized masteries.

Schools reward verbal and symbolic mastery and penalize verbal and symbolic failure repeatedly, formally, and massively. The informal social system of the school recognizes and rewards a somewhat wider variety of masteries, including athletic prowess and social skills of certain kinds. But the range of achievements for which a youngster can be publicly recognized and rewarded in school is much narrower than in the world outside, much narrower than in the world of work. Therefore, many students go through school with valuable (in the work-world) competencies undeveloped and with few experiences of success. This deprives the work-world of skills it needs and pays for and deprives the youngster of the chance to develop valued (except in school) talents. Only recently has the work-world honored such a variety of talents. Not so many decades ago, most communities had relatively simple occupational structures which called on only a few varieties of manual or mental skill. And during that time the school recognized symbolic talents little noted by the work-world. In modern post-industrial societies many talents are needed in the work-world, but the school nurtures only a few, a few which may perhaps now be in oversupply.

By bringing into school awareness and encouragement of masteries recognized in the world outside school, career education can provide avenues to recognized accomplishment for more students, develop more talents, ease unnecessary competition among students for an artificially

narrowed set of academic masteries, and thus provide the economy with workers with diverse competencies.

Cautions: Youngsters could receive from career education programs the message that learning is not as important as earning, and be dissuaded by this subtle anti-intellectualism from developing their intellects. This danger is especially serious where the school is the only representative of the life of the mind in a community. By contrast, recognition of the value of nonverbal, non-symbolic accomplishments is most needed where the life of the mind is generally valued and the highly educated predominate.

Any recognition of diversity in compulsory public schooling runs some risk of fragmenting the society by recognizing, legitimizing, and perpetuating differences of interest among the population as contrasted with attempting to submerge these differences in a concern for the general welfare. To this point, Americans have overwhelmingly endorsed the comprehensive school as an integrative, unifying force. This consensus seems to have evaporated in recent years as many groups have sought community control of schools and alternative schools that suit them better than the comprehensive school. Yet a clear majority, by prevailing standards in political matters an overwhelming majority, favor the comprehensive school. So long as this remains true, fragmentation will continue to be a danger to be guarded against in career education programs.

4. Comprehend, cope with, and influence the economic-social-political system.

In order to plan careers youngsters need an idea of how the system on which their livelihood depends functions. They need such understanding in order to vote wisely, to act wisely in their labor union or professional association or as a manager of a business. If individuals have no conception of the system of which their actions are a part, they cannot behave sensibly. In an increasingly interdependent economy, this means being able to see past one's own job to one's firm, the firm's industry, to the national and international economy. Those who do not understand the basic outlines of this system are likely to misjudge the consequences of individual and collective actions.

Students should also understand how the economy (and associated social and political entities) functions on a human scale. How do new jobs come into existence and old ones disappear? How do large-scale developments affect individual job-holders? How can individuals affect their economic circumstances? How are business enterprises started, sustained, and disbanded? How do individuals amass wealth? How do banks work? The stock market? etc., etc. If career education could make such understanding available to all youngsters in a way that they could use it, it would greatly aid them in their individual careers and aid the economy and the nation by supplying it with more sophisticated participants.

Cautions: This purpose is not fulfilled by traditional secondary school economics courses, though it may seem to be. To fulfill this

purpose a school program would have to be accessible to youngsters whose abilities and inclinations in matters verbal and symbolic are low and it would have to deal with the human concerns of people on a human scale -- such matters as factors affecting the availability of jobs, the prices of commodities, and the like. The comprehension to be sought is a practical one demonstrated by abilities to act intelligently rather than by ability to answer test questions.

5. Acquire the means for self-support.

Youngsters who do not go on to further formal education after secondary school either join the work-force, join the unemployed, or become part of a mysterious and apparently growing body of teenagers who are not employed and do not look for work. The last two groups are public problems and also, evidence indicates, personal problems to the teenagers and their families. The need for employment for them is clear. If career education can help them acquire the means of supporting themselves through work, it will respond to important social and personal needs. But it is also important that youth who continue in school have some means for making money, because many of them must work part time to pay the expenses of study.

A youngster who is able to support himself or herself is relieved of a major source of personal anxiety among youth. They have a very real and tangible asset to show for the time and energy they spent acquiring skills. They also have the best possible introduction to the realities of work -- actual experience. And if career education makes it possible for them to reflect on this experience before they leave school, they

should have a firm basis for further learning on their own.

In some cases the missing element needed to give a youngster the means for self-support is a job skill like typing or lathe operation. But in other cases the missing element may be credentials, some initial experience to show to skeptical employers, or information about how to market a skill the youngster already has. It seems unwise to decide in advance and in the abstract that all youngsters need to be taught job skills. What does seem desirable for all youngsters is job experience, real experience with real rewards and real responsibilities. Such experience is prime evidence to the youth themselves, to employers, and to the general public that the youth is qualified and able to perform satisfactorily at this job.

Cautions: Every effort possible should be made to ensure that any component of a career education program specifically directed to this purpose does indeed make youngsters more nearly able to support themselves. Job-skill teaching programs are especially vulnerable to obsolescence. Furthermore, many employers do not place as much importance on the job-related skills of potential young employees as on attributes of character such as responsibility, dependability, perseverance, initiative, and the like. One way to guard against the possibility of irrelevant job training is to arrange for every student who undergoes any sort of job training to have some culminating work-experience in which the skills learned are applied, or, if they are not, in which all parties concerned--the school, the employer, the student--are brought face-to-face with their irrelevance.

Long, specialized training in the secondary school with heavy

expectations that a youngster will continue in a particular field are risky. The risk for the society is that youngsters will be highly trained at great expense in skills which they may never use, because of changes in the economy or in the youngster's necessarily unformed career plans. The risk for the youngster is that (s)he may be locked into an inappropriate career at an age when (s)he is too young to realize it is inappropriate.

The charge is frequently made that direct job training is anti-humane, is incompatible with the liberal and humane ideals of general education. For example, one set of critics is on record as claiming that "teachers who teach only marketable skills cannot innovate in the direction of providing students with maximum autonomy and variety." (Nash and Agne.) Such charges seem groundless to us. Why is it any less humane to teach a youngster a job skill that will make him self-supporting than to teach him a critical skill that will enable him to detect unsupported arguments, say, in political discourse? Having a job skill is not the whole of a general preparation for life, but neither is any sort of purely academic preparation.

Some final cautions:

1. Career education should not encourage students to make irreversible choices of occupation before completing secondary school. (On the other hand, it should permit those who freely make such a commitment to pursue it as far as is practicable in the given circumstances.)
2. Career education should broaden youth's horizons concerning life styles as well as careers beyond what their immediate families, communities and localities would normally permit them to see and experience.

(Media, necessarily oriented to entertainment, systematically distorts these matters in the interests of drama; so they cannot be depended upon to perform this function.)

3. Career education should make and allow students to make much fuller use than is now commonly made of community resources, especially personnel and organization in the local area.
4. Career education programs should take explicit account of the existence of social and economic differences and the ways in which these differences interact with career choices and patterns.
5. Career education programs should not exaggerate the satisfactions available from work, per se, nor idealize jobs. This means, among other things, that career education programs should face the genuine limitations of the personal control of and power over one's personal career that modern life puts on us all, and that it should face squarely the disparity between the ideals of democracy and the extent to which we have been able to achieve these so far in the workplace.
6. The public and its leaders must not be given the impression that career education by itself can have a significant impact on such deep-seated social problems as unemployment, crime, welfare, and drug abuse. These problems arise from many causes and will undoubtedly need to be addressed with many tools simultaneously.
7. Career education should include concern for self-employment as well as jobs as traditionally defined.

Part II: Program Development for Career Education

The previous section of this report presented and discussed the various ideals and goals that career education should seek to attain. While the identification of goals is a major operation in educational planning, the formulation of programs and their implementation with students must be undertaken if goals are to be more than empty slogans or hollow shells. It is the function of this section of the report to: 1) identify the factors that should be considered in developing career education programs; 2) identify the types of programs that can be developed; and 3) describe some examples of these various types.

We take the view that there is no single educational program in general or in career education in particular that is suitable on a priori grounds for all students in American schools. What constitutes curricular virtue is only partly determined by examining the program itself; the population for whom it is considered relevant and the communities served by the school perform a central role in determining the suitability of what is proposed. Indeed, it is through an analysis of the characteristics of the population that some of the criteria for program formulation arise. What are these characteristics? In what way should they influence the nature of career education programs?

Factors to be Considered in Developing Career Education Programs

Envision a continuum of developmental characteristics. On this continuum several human features run parallel. One of these, and the one that has received the greatest amount of attention in education, is

typically referred to as intellectual development. According to developmental psychologists, the child's intellectual abilities alter over time in their ability to perform particular cognitive acts. The child of five or six, for example, is said to be unable to grasp abstract concepts such as "work", "justice", "honor", and is unable to place himself in time, looking backward and forward in any significant way. The child of eleven or twelve, however, has matured sufficiently to be able to grasp such concepts and thus, theoretically, is able to benefit from programs that use such concepts as major organizing centers for curriculum content. The point here is two-fold: first, the child's level of cognitive development from, say, a Piagetian point of view, provides a significant theoretical frame of reference for the creation of career education programs since it allows curriculum developers to consider the modal or typical level of ability in a given population; second the range of cognitive development will not only vary from group to group of children of approximately the same age living in different environments and sub-cultures, but even within a group of children of the same age and coming from the same environment or sub-culture, a wide range of cognitive variation is to be expected. The implications of these facts are straightforward: 1) the use of a cognitive theory of development has to be flexibly interpreted and applied for children coming from different backgrounds, and 2) within any program of career education for a given population, a wide range of developmental abilities will be found; therefore, the conceptual ceilings and floors of curriculum activities probably should be fairly wide and flexibly conceived.

To complicate the matter even further, Piagetian theory is only one of several developmental views of childhood. Eric Erickson's conception of human development emphasizes other aspects of this process; Freud's still others; Abraham Maslow's still others. The point here is that each of these frames of reference -- as well as others that could be identified (Lewin, Heider, Vygotsky, for example) -- sensitize curriculum developers to human characteristics relevant for guiding the selection of both content and goals for educational programs. It should also be pointed out that these various views of human development are not value neutral with respect to educational goals. Each of them harbors, albeit implicitly, an idealized image of man. Cognitive virtue for Piaget, for example, is scientific; he has very little to say about artistic knowing as a human achievement.

Envision now a horizontal continuum crossing through the vertical developmental axis. This horizontal continuum extends from upper class, urban social characteristics to lower class, rural social characteristics. What this continuum implies for the planning of career education programs is that local considerations such as geography, ethnicity, and socio-economic status are relevant features to consider in formulating content and goals for career education programs. Children of the same cognitive level coming from different backgrounds may require quite different content in order to comprehend what they will encounter in the program. What one refers to with respect to careers, job opportunities, life styles

need to be within the experiential (as contrasted to the cognitive) scope of the child. To present to children who have never been to an urban area a discussion about the tasks of city management would require examples quite different from those that can be provided to children growing up in an urban center where political corruption is as well known as Henry Aaron's homerun record

The point here and in the preceding paragraphs is simply one of underscoring the fact that educational virtue does not exist in the abstract. Meanings are made by man. The kinds of meanings that children can construct within Career Education programs will be influenced in large measure by their own cognitive abilities on the one hand and by their experiential background on the other. The implication, therefore, of this observation is that there is not likely to be a single career education program suitable for all children of the same age. The character, content and aims of programs should emerge not only from the general aims of Career Education itself but from the conditions existing in the context in which such a program is to function. This means that curriculum planning is partly a consequence of contextual "diagnosis" or as it is sometimes called, "needs assessment".

Levels of Abstraction in Goal Formulation

Another major dimension in the development of Career Education programs deals with the levels at which its goals are conceived. We have already identified those goals that in general seem most valuable to us, as well as those that have secured support in the literature of Career

Education. However, it seems useful to point out that in formulating goals for career education options regarding the scope of such goals are available to program developers. At the most general level of abstraction no distinction whatever can be made between career education and general education. One could argue that career education properly conceived is an education that prepares the young for the career of life. Therefore, those intellectual skills, those avocational interests, and those moral values that make life livable to the full, should be the basic emphasis of career education programs. Learning how to live is far more than learning how to make a living. Many people do the latter well, but fail miserably at the former. Career education writ large is that form of education aimed at the cultivation of man's rational, aesthetic and moral nature.

This global view of career education can be contrasted with programs that aspire to no more than enabling students before they leave secondary schools to obtain specific vocational skills that will make it possible for them to secure wage paying jobs. The conception here is that the young should be trained to do some sort of productive work by age 17 or so. Career education programs should insure the acquisition of such skills, whether or not the student chooses to use them. Grand goals such as rational development, aesthetic development, and moral development, it is argued, are empty unless the student can function in an economically productive way in the society. It is the business of career education to make the acquisition of specific marketable skills possible within or under the aegis of the school.

Between these extremes there are, of course, many more moderate positions. One could argue, for example, that to conceive of career education as preparation for life's career is to obliterate any distinction between the long hallowed aims of liberal education and the goals of career education. Assimilation would eliminate the identity of career education as an enterprise having its own educational integrity.

Similarly, one could also argue that focusing career education on the acquisition of job skills related to specific forms of work is to risk wasting the student's time acquiring skills that might be obsolete by the time he enters the economy. Furthermore, the jobs might not be available even if the skills the student acquired are not obsolete.

Middle ground goals for career education include the development of job cluster skills, that is, skills that can be used in a family of job types such as skills used in the health service fields. At a still more general level of goals for career education are those that seek to develop in the young an appreciation of the importance of work, of responsibility, punctuality, and the like. These goals derive from the identification of those personal traits that contribute to achievement in the economic sector of society. Unlike the development of specific or job cluster skills, goals at this level tend to be largely, but not exclusively, attitudinal.

The overall conception of career education, from the general education conception of career education to the specific technical training

approach, is only a part of the structural and conceptual features to be considered in developing career education programs. Once having identified these features, other decisions of a structural variety remain to be made. Two of the most important of these deal with the relationships career education curricula are to have with other curricula within the school, and with the duration of career education curricula within the parameters of the school year.

Types of Curricula in Career Education

In this regard there are at least four major possibilities and their combinations. These possibilities are presented in Figure 1.

	Short Term Use	Long Term Use
Discrete Type Curricula		
Integrated Type Curricula		

Figure 1.

Discrete Type Curricula are those educational programs developed to stand alone as independent courses of study within elementary and secondary schools. For example, mathematics at the elementary level and European history at the secondary level are most often treated as discrete type curricula. The content, aims and sequence among curriculum activities are meant to have their own logic or integrity. Discrete curricula abound in American secondary schools; efforts at integration within courses of study are marginal considerations for the most part. Career education programs could, in principle, be designed as mathematics and European history courses are presently designed, that is, a portion of time could be blocked out of the existing school curriculum to be devoted to career education.

A curricular move in this direction has certain consequences. One of these is that the more all encompassing the program becomes the more difficult it would be to justify. If the aims of career education are the same as those of liberal education, all subjects can claim to contribute to the achievement of such aims; hence the justification for a separate course of study to do what all studies do would be difficult. If, however, the molecular end of the continuum were emphasized, the justification for a discrete type curriculum is made easier. Highly specific vocational skills are not likely to be developed unless specific provisions with respect to time and instructional personnel are provided.

But this is not the whole story. The move toward a discrete curriculum encounters other problems that are less salient in integrated type curricula. In developing a discrete curriculum, explicit legitimation

for it must be provided by the school since it may mean displacing other fields of study to "make room" for the new program. It would be naive to ignore the high probability that political forces within the school by teachers would not be something to have to contend with. These, in turn, would affect the attitudes of administrators toward these curricula. Even the introduction of anthropology for secondary school students had to masquerade under a pseudonym to be acceptable to teachers of the social studies (Hanvey, 1971).

The point here is that whether one chooses to approach the development and implementation of career education programs from discrete or integrated orientations, certain assets and liabilities accrue. The ones identified are a few of them.

The integrated curriculum can take two forms. First, it can represent an effort to combine several existing courses of study into one unified block. Related arts, social studies, "The Sciences and Man", core curricula, are examples of educational programs organized along multidisciplinary, interdisciplinary, or thematic lines. Career education programs could be designed in such a way that they integrated what is now offered as discrete programs of study. Thematic ideas could be formulated -- "The Nature of Work: Present and Past" -- which could then be used to reorganize existing courses of study. Of course, the use of such a principle for restructuring curricula would require a major commitment among those working in school districts, since its use would require those teaching in traditional curriculum formats to recast their view of their courses. To one accustomed to viewing himself as a teacher

of physics or music, it would mean a willingness to reconceive, if not the content of his courses, at least the way in which they were approached. This would require a major shift in the teacher's orientation to the field.

The curricular virtue of this approach to an integrated type curricula is that it could synthesize what is all too often a collection of curricular bits and pieces that remain isolated in both the school curriculum and in the student's mind. It could also, to use that much abused word, make more relevant what it was that students study in school. Such relevance could be secured by learning how the various independent fields of study illuminate some common topic or problem. If the topic or problem is one which touches the life of the student in the first place, the meaningfulness of what is learned should increase.

The second form in which an integrated type curriculum can be created is through the production of curriculum materials that are designed to enrich existing courses of study with resources instrumental to the aims of career education. One could argue that the most expeditious way of introducing career education in school programs is not by trying to impose new courses on an already overloaded curriculum, but by designing attractive materials that would blend into courses that already exist. Furthermore, such materials, even if used by one-fourth of the teachers, would provide more contact with career education than any single, independent course could provide.

In this model of implementation some courses would, obviously, lend themselves to aspects of career education content that others would not. For example, developing an awareness of the vicissitudes of the

American economic system is more appropriate to a civics or history course than to courses in music or physical education. Music and physical education, however, provide opportunities for career education that civics and history would find difficult. Thus, given the major aims of career education, curriculum developers would try to determine how such aims could be realized through existing courses of study if new and attractive curriculum resources were prepared and effectively disseminated.

The two types of curricula that have been identified -- discrete and integrated -- can be employed on a variable time schedule. One could have, for example, discrete programs that last for an entire school year or for three or four weeks once or more times during the year. The same holds true for integrated type curricula. Time is a variable that is frequently neglected in curriculum planning since by tradition the forty week school year has become virtually sacrosanct and courses are designed to function within this period. And besides, it simplifies administrative life. Yet there is nothing that is inherently educationally significant to this time span. Thus, when one conceives of the ways in which career education programs can be structured it should be clear that several alternatives are possible and that each alternative is likely to have particular costs and benefits.

The factors and variables we have identified thus far appear to us to be of major importance in the conceptualization and development of career education programs. Considerations of human development, socio-economic status and geographic location, discrete as contrasted with integrative approaches to curriculum development, long term as compared to

short term units or resources; these are extremely important parameters for curriculum developers to consider when formulating the overall structure to guide their efforts. Within these factors there are other factors that can be considered, almost infinitely so. Although we will not attempt to formulate an exhaustive list of such factors, we do want to mention two that seem especially important.

Location and Mode in Career Education

One of these factors is the location at which career education programs are provided; the other is the mode through which the students' experiences are secured. Although the classroom is still by far the dominant locus of school experience, School Based Career Education can also be secured in out-of-school settings -- shops, corporations, retirement homes, hospitals, department stores, factories. While the use of such settings has ramifications for the structure and schedule of school programs, their use can provide a sense of career reality that would probably be impossible to secure in the typical classroom. In addition, the use of out-of-school settings for school guided educational experience is consonant with the desire of many educators and educational theorists to deinstitutionalize the school. Identifying both people and places in the school's community appears to us to be promising for the development of effective career education programs.

Most of schooling occurs through the use of verbal and written symbols. Being able to speak and write well is the sine qua non of effective school performance, and increasingly so as the student proceeds through the grades. The teacher delivering a lecture to a class,

assigning a reading, or reviewing papers that students have written are the familiar images of classroom life. Yet, the range of sensory modalities and modes of internal representation through which most of our learning occurs is far wider than verbal or written discourse. The preparation of visual materials, including but not restricted to film, television and the direct observation of career relevant activities, has the potentiality of reaching those students whose aptitudes for learning are other than those engaged by verbal, written or similar means. Indeed, virtually the same content can, in principle, be made available to students in different modes. This approach to curriculum is still but a slowly rising star on the educational horizon, but it is one that appears to us to be promising and worthy of support. Indeed, one could argue that if a Piagetian conception of cognitive development is employed as one criterion for the creation of curriculum activities for children who have not yet reached the stage of formal operations, the use of non-symbolic materials and modes are especially important. For example, children between five and ten years of age are not very likely to acquire a meaningful abstract conception of the function policemen perform in society, but they can understand what policemen do. Displaying actions of policemen would be more appropriate than verbal description.

Thus far we have identified some of the important structural features that can be used in creating varieties of career education programs. Structural features do not exhaust the ways in which programs can be typed; indeed, we have identified these features to help articulate considerations that would maximize the curriculum developers' options in program design. One of the most powerful bases for the typing of programs

emanates from the ideals and aims toward which the program is directed. In this regard we proceed from the following premises. Career education programs should be logically related to the ideals one holds both for life and for education. These ideals can themselves be used to generate a variety of goals for career education. These goals can and ought to be appraised through the application of three criteria: the privations which the goals purportedly rectify, the urgency of the goals in light of the significance of these privations and ideals relative to others, and the extent to which achievement of the goals are feasible within the context of school based career education. Each criterion, by itself, is inadequate to justify the saliency of a particular goal; some goals might in the existing state of affairs already be achieved, some goals might not be especially urgent, and others might not be feasible within the context of the program.

Once having identified goals that meet these criteria, priorities among them can be established. Once established -- and this is something about which more will be said later -- programs that embody these goals can be described. Their description is provided with several cautions. First, it should not be assumed that the programs described are empirically effective; we have no evidence of an empirical sort about this. Our judgement is made through logical and content analysis. Second, it should not be assumed that the programs described exhaust the ways in which goals can be pursued; these programs are intended to be seminal and suggestive rather than to serve as models to be imitated. Third, the forms programs take for any particular set of goals will need to be designed to suit the

contexts in which they are to function. Thus, the criteria we provide, the factors we identify, and the programs we describe are intended to be flexibly and intelligently used as tools, stimuli, resources for programs designed to serve the needs found in particular situations. With these caveats entered we will now proceed to describe programs that appear to embody the goals of career education which have been identified in Part I of the report as having high educational priority.

As already indicated five goals emerge from our analysis of the literature and our own assessment of what career education programs would do well to try to achieve. Each of these goals will be identified once again and programs suggested that appear to us to be promising in relation to the achievement of the goals.

1. Career education should help secure a better match between people's characteristics and competencies and the career opportunities available.

To achieve this goal three types of considerations are important. First, students need to have opportunities to try out through actual job experience, simulation or other means, a range of different types of occupations. Second, students need to know something about the types of career opportunities that are available in their immediate environment and beyond. Third, students need to have opportunities to learn of their own aptitudes and interests. This might be provided through the use of appropriate diagnostic tests and interviews with trained counselors.

The first consideration is obviously important in order for students to know whether their own aptitudes and interests fit the demands of the job. Children sometimes are encouraged by parents and other adults to focus upon specific occupational goals at an early age. Ambitious parents tend to want to instill clear, high status vocational goals when their children are young. These goals are frequently narrow in scope and at times ill suited for the aptitudes that their children, in fact, possess. In such cases it is especially important to provide opportunities where students can try out and secure information about occupations different from those they know about or have been encouraged

to consider by eager parents.

The second consideration, that dealing with career opportunities, is somewhat more difficult to take into account in developing career education programs, especially for those who are several years away from finishing high school. This difficulty emanates from the fact that the career opportunities that exist today may not be available tomorrow and new ones may appear. However, when trends can be discerned they should be made known to students who are old enough to appreciate their meaning.

The third consideration is important to give students insights they might not possess concerning their own strengths. Part of the function of skilled diagnosis and assessment is to illuminate such strengths.

One type of program that appears suited for career exploration, especially for students of high school age, is the exploratory experiences program. Such a program, offered through high schools, makes it possible for any high school student who wishes to volunteer his time in shops, industries, offices and other places of employment, to do so through an "exploratory experience office" located in the school or school district. This office, run by students and volunteer or paraprofessionals, establishes contact with local employers and builds up a file of possible placement positions for students who wish such experiences. The office prepares a dossier on the student and if the type of position the student requests is not already on file, the staff at the exploratory experiences office tries to locate such a position. Once having identified a position close

to the student's interests, the student is accompanied by the volunteer to the prospective "employer" with his dossier and the three of them discuss the type of work involved. If the situation is agreeable to the student and employer, work begins -- for as long as the student chooses to participate as a volunteer in the firm. Upon completion of his or her assignment with the firm, the employer may be asked for a letter describing the quality of the student's contribution to the firm. This letter can then become part of the material submitted to colleges and universities should the student choose to apply for admission.

This type of relationship has several advantages for both student and employer. For the employer it provides the opportunity to secure labor at no direct cost, it provides an opportunity to perform a social service, and it creates the opportunity to stimulate young people to consider the particular type of work in which the firm engages.

For the student it provides opportunities to work after school hours in positions in firms that might not be willing to hire high school students on a wage paying basis. And if they did hire high school students for wages it probably would be in positions that were menial or in other ways unattractive and limited. It also gives students a genuine experience in learning what it feels like to work in shops, plants, offices, and the like. Such experience provides the base line needed to begin to make judgements about those lines of work suited to their own interests and aptitudes.

When one considers that child labor laws, compulsory schooling, and the social structure of society in general put adolescents in a

feckless position regarding work opportunities, the attractiveness of an office within the school or school district that makes links to the world of work for interested adolescents, becomes even more obvious. Students could through such a program try several different types of work situations to determine which seemed best for them.

Another virtue of such exploration within the actual firm is the potential realization that job satisfaction is not merely a function of the nature of the work task per se. The setting, the social conditions that pervade it, the way in which work is monitored; all of these features of work jointly contribute to the satisfactions individuals secure from work. These extremely important aspects of setting and conditions would be difficult to provide within the school itself.

There are cautions that should be taken into account in providing work opportunities that are designed to help adolescents obtain the "feel" of the work place. One of these has to do with the possibility that the student's expectation for work might not be realistic and hence he might experience a level of dissatisfaction that might be educationally dysfunctional should that experience go unexamined. Some provision should be made by the school or school district to enable the student to appraise the work he has been doing, to help him elucidate its characteristics and to understand the extent to which that particular form of work is characteristic of work in general. In addition, such analysis could help students modify or correct their phantasies about the world of work and thus to obtain a more realistic conception of its satisfactions and frustrations. In short, the school or school district should perform

an active role in helping the student critically examine his experience in the work place. Such a process would not only be useful to the student, it would also provide a very useful form of feedback to the school.

Another vehicle that can be used to provide students with information about career opportunities is the preparation by the state employment bureau of an appropriately written newsletter which describes current trends in employment opportunities. Such a newsletter, designed in an attractive format and geared to a readership consisting of high school juniors and seniors could include feature articles about different types of work, the qualifications needed for it, as well as providing data about emergent needs and future forecasting of various occupations. Such a newsletter distributed to secondary schools in the state could do much to help students consider career opportunities more intelligently.

This program could be supplemented by visits to employment agencies, offices that hire people for various industries and the like. Many students do not have clear ideas about the procedures to be used in job seeking and selection. One of the most basic of these deals with knowing of the existence and location of such offices, how to make applications for positions, and other relevant features for obtaining a position.

One of the most central problems in enabling students to make wise choices about careers is that of helping them experience the impact of work in a particular field: What a job feels like, the satisfaction it affords and the frustrations it exacts. Different people in the "same" position experience different satisfactions and frustrations and actual

trial is the most telling and direct means to discovering them. However, schools can, to some extent, enable the young to experience these vicariously without actual participation in the job. Several possibilities emerge. One is the preparation of literary narratives, interviews, and artfully constructed films and videotapes that would provide adolescents with accounts of the nature and impact of different types of work. These narratives and films should illuminate aspects of work that are not obvious to the outsider. For example, airline pilots earn a great deal of money compared to the national average, but the job requires many days away from home and family, long stays at home awaiting assignment, considerable amounts of "jet lag" and frequent reexaminations of competency by the Civil Aeronautics Board. Students who consider only the glamorous side of flying risk severe frustration if these other aspects of the career are distasteful. Some students, at least, might not want the type of family life that commercial flying tends to engender.

Well constructed materials could be made available to students in a variety of fields so that they could get the "feel" of the work and its entailments and enter into the position, at least as close as artistic narrative and film will permit. The School Based Career Education Program might sponsor a project aimed at preparing such materials for use at various levels of precollegiate education.

2. Career education should help youngsters develop awareness of adult roles and the capabilities for fulfilling the requirements of those roles.

One of the consequences of modern technological development in America is that it has separated the young from adults. This separation

has created for adolescents a risky situation. The lack of frequent and significant contacts with adults constitutes a lack of models through which, consciously or unconsciously, the young can discern adult attitudes and styles of thought and action, and find stimuli ("inspiration") toward emulation. This lack of models is made more serious still by the extent to which the young have filled the vacuum created by the lack of meaningful interaction with adults by creating a peer group system which devises its own styles and attitudes which may contribute little to the needs which adult life will exact, however adequate it may be in the fulfillment of immediate social needs.

Yet if the young are to become self-sufficient, productive members of society they surely could benefit -- as they did two or more generations ago -- from positive adult models in the various roles that adults perform. In years gone by the adolescent had opportunities to see such roles performed daily. Adults worked in close physical proximity with children. In addition, children could perform socially significant tasks on both the farm and in the shops. Those days are gone. More often than not children are asked to perform chores that they recognize to be mere tokens of work in exchange for their weekly allowance. The young man or woman of 15 who wants to and is able to work finds it extremely difficult to locate places where his ambitions can be realized. Ours is a society of delay and denial for the young.

The relationship between the presence of adult models (aside from parent and teacher, the latter of which is more visible in their work role to some children than the former) and career education is, we believe, a

crucial one. Without the presence of adults performing a variety of socially significant tasks, the young must rely on parents, teachers, mass media, the inexperienced peer group, and adventitious learning.

One way in which the young can learn adult roles and develop the competencies to exercise them is to provide them with guided responsibility for socially constructive activity. More specifically this might mean the development of a program that makes mini-grants available to students or groups of students for projects that are of social utility to the school or community. For example, many schools and communities could benefit from having paintings, sculpture, music and dance available to its residents. Each school has students whose abilities and interests reside in those areas. A student, say one interested in sculpture, might submit a brief proposal to a review committee made up of students, teachers and adults in the community to pay for the materials needed to create such a work, which then might be located on the school grounds or in other parts of the community. Other community activities -- the creation of bicycle paths, the planting of trees and shrubs, the design and construction of small buildings -- can be funded to students through career education grants. In pursuing such projects specific forms of guidance, expertise, and instruction could be provided by adults in the community who have such competencies and are willing to share them with students. Such a venture would provide a socially real point of contact between the young and those who are already skilled in the areas in which students choose to work. At present, such opportunities are all too rare in the vast number of communities in the United States.

One of the most important and yet most neglected areas in which children can learn to perform roles having real social responsibility is in the school itself. The school is after all a social organization; it can under proper guidance also become a social community. One of the conditions of community is the symbiotic relationship people have within it. In a community people use each other for their own growth and for the well being of the community itself. At a very young age children can be encouraged to participate in school in ways that generate a sense of community within it. Within the school, tasks that are instrumental to the well being of the whole can be performed with a growing sense of competency by the students. What types of jobs, what kinds of tasks, what forms of leadership, what sorts of discussion can be engaged in by the young to foster a sense of competence and self-sufficiency? These questions and the sorts of answers they yield can become the first step toward a reconstructed school environment. How can we expect children to learn to take an active and responsible role in their own lives when the school, in which so much of their life is spent, puts them in docile roles that seldom make self-initiated action in such roles possible. There are jobs within the school that children can perform about as competently as adults who now are employed to do them. There is also a collective sense of responsibility that every democratic society must possess if it is to function with equity. To what extent can students learn such a sense of responsibility in schools as they are now operated? What types of changes would need to take place if such learning is to be fostered?

Some of these changes will be made within classrooms. Others will

be made in the school as a whole. Within the classroom changes will deal with the day to day chores of distributing supplies to fellow students, keeping books and other materials in the classroom in order, being responsible for equipment, work areas and the like. Effective teachers, especially at the elementary level, are now providing such opportunities; where appropriate such opportunities could be expanded.

At the school level, students can assist in the maintenance of the grounds, in participating in school wide planning for festivals, community assistance projects and the like, in the preparation of materials needed for the school as a whole. Indeed, adults working in the school, aside from teachers, could be selected with an eye to their willingness and ability to work with the young. Such people as custodians could provide students with rich opportunities to learn about the problems and skills of school maintenance. The point here is to engender a level of participation in the school in which students can come to feel they have a real stake in its operation. For younger children the tasks will be more modest; as children mature the level of their responsibility should be increased.

To bring about such a climate in American schools will, of course, be no easy task. It's far easier to modify a single program than to reconceptualize and implement such an educational practice. Yet from the standpoint of long term consequences for career education, from the standpoint of helping the young acquire the attitudes and skills that breed a sense of social competence relevant to the competent performance of adult roles, such an environment appears to us to be extremely important.

Another device, this one of a short term variety for helping youngsters obtain a sense of adult roles that they normally do not have an opportunity to see, is to encourage the establishment of a National Children to Work Week. This week would be sponsored by the various states and would be operated by firms and industries throughout the United States. Its purpose would be to establish opportunities during that week to enable children from the schools to visit plants, offices, shops, and other places of work where they could observe and participate in limited ways on tasks that adults do in such settings. Schools and the private sector would work jointly to formulate plans that would make such visits productive and interesting for the children. This might require that a few days prior to the National Children to Work Week, representatives from the private sector would visit classrooms to talk to the children about what the business or the firm was, how it operated, and what kinds of jobs people performed there. During the actual visit the same individual would provide the interpretation needed by the children and generally serve as their host.

It is well recognized that few children under ten years of age have even a reasonably clear idea of what their parents do at their work. The opportunity to see them in these roles is virtually absent. Such a National Children to Work Week could contribute to de-mystifying the world of work and could in the process establish links with the schools that might lead to other types of educationally productive relationships.

Still other types of programs that would help children become aware of adult roles is to encourage schools to invite people in the community who perform or have performed productive and socially significant roles to

visit the school to work with students. Such a program, especially if it called upon retired people (who often are more willing and able to share insights), could be very helpful.

3. Career education should enable compulsory schooling to provide more diverse routes to recognized and rewarded competencies in school.

Although most people recognize that social productivity and personal satisfaction can be secured from the exercise of competencies not employing the word or the number, schooling in the United States give these skills the highest of premiums. Nevertheless, social productivity and personal satisfaction can be secured through the exercise of other competencies and some children seem to possess greater aptitudes for other such competencies than for symbolic manipulation. Yet schools, because of their tradition and their reward system, inadvertently penalize that portion of the school population whose principle aptitudes are not in the verbal or mathematical areas. The significant rewards of the school, for the most part, are provided to only a certain portion of the school population.

Career education programs can be created that bring into school for short term stays of demonstration, instruction and consultation with students and teachers, individuals whose competencies are in areas other than the verbally or mathematically symbolic. These people might include mechanics, artists, musicians, gardeners, and other such individuals whose skills depend upon aptitudes that are now neglected or underrewarded by schools. Such individuals could be provided with a type of fiscal voucher or contract that would describe the amount of time and school

service required. Periods could be blocked out of the school day when demonstrations, advice, and discussions about the individual's work could be provided to students and teachers. For example, children in many communities are or could become interested in model cars, planes and boats and would welcome the opportunity to learn how to build and maintain them. People in the community who are in this business might be willing to talk to students and perhaps demonstrate how such care and service could be provided by children.

There are two major goals here. First, to broaden the range of tasks and the variety of competencies that are considered important by the school so that opportunities for achievement are not withheld from those whose aptitudes or interests are outside of the realms now valued. Second, to provide children possessing such aptitudes with an opportunity to appreciate the social significance of their own abilities. It is not difficult for a child to conclude he is not a good person because he is not good in school as its program is now constructed. If, through the resources and impetus of the School Based Career Education Program of the NIE, the range of rewarded school competencies could be expanded, the School Based Program will have made an enormous contribution to the improvement of American education.

In addition to people in the community who earn their living through the exercise of competencies that do not depend heavily upon verbal or numerical skills, there are others in the community who have hobbies and other avocational interests that are worth sharing with children. These interests, though non-wage paying, might become for some children exemplars

of the type of occupational life they would like to lead or interests they would like to cultivate. The point here is that the type of resources that communities possess are far wider than schools utilize.

Two types of policy change that appear especially relevant for expanding the routes to rewarded competencies within the school is to encourage schools to provide some educational credit for work done outside the school when that work culminates in demonstrable career related skills. If one conceives of the school as one of the agencies that contributes to the educational development of the student, and at the same time recognizes the potential and actual contributions of other agencies, it becomes easier to rationalize a broader base than formal schooling provides for securing educational credit. There is no inherent reason why the school building should be the sole location in which educational credits can be provided. By recognizing the fact that educational development is not the monopoly of the formal school the means for providing such opportunities can be found or developed.

The second type of policy change concerned with the reward of competencies is to mount a program that is aimed at encouraging colleges and universities to broaden the criteria they use for admitting students. College admissions requirements -- real and perceived -- often limit educational opportunities for students by specifying through rumor or rule that to be admitted students must study what is euphemistically known as the "solids". While the traditional academic skills are important, skill in their use is not the sole determinant of social productivity. Unless we can make some progress along this line, it seems likely that status differences and hence rewards will continue to go to those

whose aptitudes are consistent with traditional university expectations.

We are interested in broadening the base through which children and adolescents can receive recognition and satisfaction. The channels now available are narrow ones compared to the range of human aptitudes that exist. While colleges and universities are not obliged to reward all human abilities, the range, we believe, could be judiciously expanded. If other human competencies are to have a place in the schools that is more than marginal, the environment of the school must provide for their recognition and their reward. To bring about such a change will require attention to the "details" that we have identified as well as to others. What is honored in a country, Plato said, will be cultivated there. There can be no effective career education for students as a whole unless the school views career education as a significant part of the student's general education and takes those steps necessary to ensure that it has a place of honor in the school.

4. Career education should help youngsters comprehend and learn how to negotiate and influence the workings of the economic-political-social system in which they live, both in the aggregate and as it affects them individually.

The socio-economic system in which we live is not a simple one and making one's way through it is not guaranteed by the presence of skills or competencies alone, since decisions about jobs, career patterns and other opportunities are not always based on the recognition and reward of ability. To help children learn how the system operates, to help them appreciate the way in which decisions affecting them are made, to

give them a realization of the kinds of pressures that influence such decisions appears to us to be relevant to any adequate conception of career education.

One potentially fruitful source for helping children understand the workings of the economic-political-social system is through analysis of material presented in the mass media. It seems unfortunate that so much of the material that comes into our homes over television -- the Watergate investigation, the preliminary hearings, the current accounts of Vietnam and Cyprus -- are hardly ever used in school to stimulate discussion and analysis of the events that influence our lives. The drought that has affected the growth of corn in Illinois will in the fall and winter of 1974 affect the cost of beef in California and Maine, yet these connections are seldom made in schools even though editorial and news releases are available in the press for their use. The School Based Career Education Program could provide funds to local school districts to embark on a program with the mass media -- newspapers, television networks and other firms -- to obtain clips and articles that could be reproduced and used as the subject matter of instruction in schools. What better way is there to learn about the constitutional process, about the sources of influence in government, about tactics used to control votes, than to watch and then analyze the events occurring during the Republican or Democratic National Conventions. What better way is there to understand the fact that the meaning and significance of political events are colored by the political beliefs one holds than to compare the editorials of newspapers whose political views differ. These resources, which now are

largely unused, could be secured and packaged for use in schools and geared to the kind of goals that would help students become more savvy about the political and economic system in which they live. These materials -- television clips, for example -- often have a vitality about them that cannot be paralleled by existing curriculum materials.

Labor contracts, stock market trends, the analysis of banking procedures, the real cost of mortgage money; these are but a few of the materials, agreements, procedures, and events that influence our lives. Yet, for the most part, they are neglected, especially for economic and political analyses. It would be possible for the School Based Career Education Program to support curriculum development work aimed at utilizing the material available in the mass media that relates to the concerns of career education. These materials should include as well the psychological analysis of advertising on television and in the press to help the young become sensitive to the ways in which ads become persuasive, to help them learn how to identify the devices and techniques that are used to motivate the buying patterns of the public.

Another way in which students can learn to negotiate the economic-social-political system is to have opportunities to deal with that system through problem-centered curricula. Secondary and junior high schools could provide opportunities to students to work on projects that dealt with community problems: the study and improvement of traffic flow, the installation of bicycle lanes, the development of small parks on empty lots, the planting of shrubs and gardens on public land, the installation of stop signs and traffic lights. Such projects, because they would require

the expenditure of public funds and because they would engender and challenge political and economic interests would, we believe, provide students with direct experience with the power structure of the community. Such problem centered tasks would not only give students the opportunity to work on socially significant tasks, they would require the effective integration of a variety of skills, both theoretical and practical. The conceptualization, solution formulations, and implementation phases of such activity would go a long way in teaching students about the vicissitudes and strengths of American political life.

To motivate school administrators and teachers toward the development of such problem centered curricula, summer institutes could be sponsored in which school people now employing such an approach could serve as instructors and consultants. These institutes as envisioned would be open to teams of two or more individuals from the same school in local districts, at least one member of the team to be the principal of the school. These teams, meeting with other teams in an institute of about 30 people, would develop plans for initiating such programs during the forthcoming academic year. These institutes might meet for two intensive weeks at the beginning of the summer, and would meet again during the latter part of the fall or early in the new year to report progress made and to work out problems that had arisen during the implementation period.

During the initial institute the teams would identify potential topics or problems appropriate for the students and the community the school serves. They would also identify the resources that could be

used in dealing with such problems. In addition, structural organizational changes within the school would be designed to accommodate the type of program being developed. In short, such institutes would provide the conditions, climate, and guidance necessary for the development of community oriented, problem centered curriculum development. Subsequent institutes could deal with procedures for evaluating their effectiveness and reporting their results to others.

5. Career education should provide students in secondary school with the opportunity to acquire skill and knowledge needed to support themselves honorably when they leave school.

If one considers the developmental characteristics of adolescents, especially those who are 17 or 18 years of age, it becomes clear that by physical and cognitive criteria they have reached an optimal state of development in the former condition and a high level of ability in the latter. Yet, except for those who drop out of school, few opportunities exist for such students to acquire the skills needed to sustain themselves in the world of work. For those students who are college bound the problem is even more severe. Their ambitions and the pressures they feel from universities, combined with a lean job market, preclude opportunities to engage in wage paying work. Thus, we have a social situation where few adolescents have access to channels for the acquisition of wage earning competencies.

There are roughly three levels of work, only one of which seems to us to be relevant to the kind of skills with which we are concerned.

At one level is the type of work that is menial, takes little or no practical skill, and is compensated at the lowest levels possible. These jobs include the various forms of unskilled labor. They provide little opportunity for personal growth or career advancement. These jobs and the type of skills they require are not the types for which we believe secondary school students should be prepared, if for no other reason than the fact that the skills they require are learned in a short period of time.

At the other end of the spectrum are the professions that require some form of certification and are grounded in professional lore or theory. These positions are the ones that demand extensive forms of higher education, even for entry as an apprentice. It seems obvious that secondary schools -- even with an extensive released time program -- cannot provide for the development of skills or understanding needed for these fields of work.

It is the middle range careers, those requiring skills that can be learned in a two or three year period which do provide opportunities for personal and professional growth that appear to us to be most appropriate for career education programs to foster. Such careers include those of electricians, plumbers, lathe operators, mechanics and other skilled blue collar occupations. These occupations provide opportunities for advancement; the skills are complex, but learnable during a two or three year period to a degree necessary for maintaining oneself economically if there is a demand for such workers in the society. These occupations appear to us to be the prime candidates for occupational development during the junior or senior years in high school.

It should be recognized that there is no guarantee that students will in fact occupy the roles for which they have been prepared. Yet the learning of a wage earning competency provides an option that the vast majority of students at present do not possess. It is the availability of that option, one that can be exercised when needed or wanted, that appears to us to justify the opportunity for its acquisition during the secondary phase of schooling.

To provide for the development of the kinds of skills that have been suggested will require for most secondary schools that they establish some type of advisory board or council consisting of representatives of industry, the community, and the school, who would jointly formulate the types of programs that would ensure that those students who wanted such a program could, in fact, have it. Such a program of collaborative planning between industry, the community, and the public school would probably require released time from school during the junior and senior year for active apprenticeship in appropriate firms or job sites. Such an apprenticeship could be partially guided by members of the faculty of a school district and members of the firm or industry providing such an experience. Arrangements for the students would need to be made so that he or she could complete secondary school, perhaps in five rather than in four years. But there is nothing sacrosanct about four years and we believe many students would benefit greatly by having the opportunity to come into contact with the world of work in a productive way before completing high school. We envision such a program not being geared exclusively or even mainly for those students who are less able academically.

The program must commend itself to the entire range of students in the schools. At the completion of such a program students might receive a certificate indicating their level of competency in the field in which they worked, but even more importantly, the opportunity to find work in that field should it be available and should they desire it.

The School Based Career Education Program could fund districts that proposed the development of the types of advisory councils that have been described. The particular form such councils take will, of course, depend upon the characteristics of the setting and community in which schools and industries function. The important thing, however, is to facilitate the initiation of such a process. Out of joint deliberation will come the specific plans for such a program to be developed.

Some Unanswered Questions and Some Needed Information

Although we have tried in this report to provide the soundest analysis and advice possible, it has become clear as we proceeded with our work that many of the questions central to career education cannot be adequately answered without more factual information than was available to us. To provide for a solid empirical grounding for the development of policy for career education programs it seems prudent that the Career Education Program of the NIE commission one or more groups of research workers to bring together from the apparently existing but dispersed data a body of information that could serve to influence and in some cases justify the policy decisions that eventually must be made. This needed information is perhaps best described in relation to certain important questions that emerged during the course of our work. The questions are not intended to be exhaustive, but they are exemplary. The type of information required to answer them would, we believe, be extremely helpful for educational planning.

One such question deals with determining what percentage of people, age 17-21, who leave secondary school are under- or unemployed. How does this percentage vary for ethnic or racial groups, sex, and for regions within the country? What is the percentage of unemployment for high school graduates, and for dropouts? We want to know how severe the employment situation is for that group of Americans between 17 and 22 years of age. If they are unemployed how long do they remain that way? Such data could provide a part of the base line information useful for justifying or revising the goals of the Career Education Program of the NIE.

A second cluster of questions deals with the predictability of manpower needs. To what extent and at what level of specificity can manpower needs be predicted, say, over a three to five year period of time? At what level of confidence can manpower needs be predicted? Obviously, the ability to predict such needs would be extremely useful in vocational guidance and counseling. It doesn't make much sense encouraging students to develop skills that will not be usable when they leave secondary school. Yet, at present we do not appear to have the kind of information that could be used as a resource for career planning. We believe the availability of such information and the trends that can be extrapolated from it would be a distinct asset in the development of Career Education Programs.

A third set of questions deals with determining the location best suited for the acquisition of vocational skills. We wondered as we proceeded with our work what qualities and competencies employers sought in prospective employees. To what extent do they value the skills that a person might have obtained in a local high school? Would they prefer to develop such skills themselves? How long would it take employers to develop such skills on site, assuming they would be willing to do so, compared with the time required for such development in school?

Answers to questions such as these would shed some light on the kinds of priorities and goals that career education would do well to encourage schools to embrace. If, for example, industries or firms can develop skills in a very small fraction of the time now required by schools to do so, there would be some question as to whether the investment of time in this way by schools would be educationally justified.

The point here is that information of this sort would strengthen the basis on which policy for program development can be formulated.

A fourth cluster of questions deals with the utility of skills developed in secondary school for securing and holding jobs. What percentage of former secondary school students who have secured vocational or career related skills in school work in occupations in which those skills are employed? How long, on the average, do former students who have secured job related skills in secondary schools remain in jobs where those skills are employed? These questions and questions like them, when answered, would provide information needed for determining the usefulness of school developed vocational skills.

How much should one invest in the acquisition of vocational competencies if the likelihood of using them is marginal? We cannot now answer this question. Nor will the acquisition of factual information yield an answer directly. However, having such information will, we believe, provide a sounder basis for the type of value judgments that ultimately must be made.

A fifth set of questions deals with the wants, satisfactions and frustrations secondary school students experience regarding the achievement of career education goals. To what extent do students in secondary schools have career goals? Do they seek greater clarity and more information than they now possess? What types of programs do they believe would be most helpful to them? Are there important differences in aspirations, needs, satisfactions between male and female students regarding career planning?

In a day in which consumers are said to have an important say in

the products that are produced, it seems only right to go to the potential consumer of career education -- the student -- to find out what he perceives to be his career needs. It is conceivable that what has been deemed in his interest will not be perceived that way, or might not be among the highest of his priorities. Such information, like the information relevant to the other questions that have been raised, would help in laying a firm foundation for policy decisions for the School Based Career Education Program.

Part III: Starting Points and Procedures in Curriculum Development

Funding agencies concerned with education commonly demand a set of behavioral objectives as a part of the prospectus of the enterprise to be funded.

In our view two weaknesses attend to this demand. First, a statement of behavioral objectives and a curriculum claimed to lead to them can be examined critically for only one of two important characteristics. The plausibility of the claim that the curriculum can lead to the attainment of the objectives can be estimated. The objectives themselves, however, remain invulnerable to criticism or evaluation. They are givens or starting points as far as the document is concerned. Yet other programs may and frequently do exist, concerned with the same general area, but working toward a different set of behavioral objectives. The coexistence of two such sets of behavioral objectives constitutes a sign that objectives require some critical examination.

A list of behavioral objectives provides no evidence of whether the group has considered other objectives before selecting the list they provide, and, if so, on what grounds those on the list were selected. Sometimes a curriculum developer will have done a task analysis to determine what objectives to set. But this rarely happens, and, when it does, why should not some record of the task analysis be part of the curriculum development proposal? Otherwise how will the inevitable costs of the analysis be borne? (Or will it be done cheaply and hurriedly and probably inadequately?) But there are many situations in which a task analysis is inappropriate or not helpful. When the 'tasks' to be analyzed are themselves subject to question or are changing rapidly and unpredictably or when it is not clear which tasks are relevant, task analysis is either impossible or inappropriate. And much of general and popular education is of just this sort.

A second and related weakness lies in the bare statement of behavioral objectives, that is, a statement of the behavioral objectives apart from the larger, more general goals which confer coherence upon behavioral objectives and constitute one basis for critical estimate of the quality of a set of behavioral objectives. Such general goals are, in fact, the starting points of serious efforts at curriculum development, and a two-way relationship of some importance exists between such general goals or ideals and the behavioral objectives. On the one hand, such goals or ideals are possessed in a vague and ambiguous form, neither clearly formulated nor examined with respect to their consequences or their consistency with other ideals. Sound curriculum development consists in large part in clarification of this vagueness and rectification of such inconsistencies as may be found. Such clarification and organization occur as there are repeated attempts at verbal formulation of the ideals, as there are attempts to realize plans and materials compatible with these ideas, and through experienced awareness of what it is like to have 'achieved them' in preliminary attempts. In the other direction, these ideals and goals, however vague, constitute the organizing wholes which give coherence to the separate items in the list of behavioral objectives. Clearly then, the evaluation of a proposed curriculum study should include the possibility of an evaluation of the extent to which clarity of goals is achieved and the degree to which the goals do, indeed, confer coherence upon the objectives.

In this document we shall formulate an alternative to bare statement of behavioral objectives as an expression of a curriculum development group's purposes and intentions, an alternative that we hope will be more compatible with the ways such a group's thinking and work necessarily proceeds.

Our thinking on this problem begins in a conception of how the logic of a curriculum development project unfolds. (This conception is more or less explicit in various of our papers, including: Schwab, "The Practical, --A Language for Curriculum;" Walker, "A Naturalistic Model for Curriculum Development;" Eisner, "Stanford's Kettering Project, Some Reflections and Ruminations.") Roughly speaking, curriculum development begins in strongly held but incompletely articulated ideas about what is necessary and desirable in general. The most desirable form of life for the individual, the most desirable condition of society or the state, and so on. These ideas are not only used in deliberation to shape plans and materials for curriculum, it is through the deliberation that the ideas are translated from their general domains to the domain of education. In addition, these ideas are tested by means of the judgments the group makes about the adequacy of plans and materials which embody them. Tests of the plans and materials are always also potentially tests of the ideals which they embody.

It is our position that the procedures used by funding agencies for determining whether to finance curriculum development should reflect an understanding of this process. And it is our purpose here to suggest how such an agency might go about determining whether to finance a given curriculum effort.

We have already pointed out two shortcomings of lists of behavioral objectives when considered as a basis for judging the likely merit of the proposal if funded. But lists of behavioral objectives are also unsatisfactory as a means for communication of purpose among developers for two primary reasons.

First, the mere aggregation of objectives gives no indication of possible relatedness among them. Perhaps objectives on the list are incompatible, mutually contradictory, or otherwise not coherently related. Perhaps one large set can be accomplished relatively easily together while another single stated objective might require weeks and the attainment in addition of several additional, unstated objectives. These relationships must be known, or assumptions about them made, if costly empirical procedures about sequence and relationship among the objectives are to be avoided and if the resulting curriculum is to achieve any larger purpose beyond the particular day-to-day objectives. In some cases the relationships among objectives are either obvious or implicit in the task domain from which they were derived. In these cases the behavioral objectives approach would be appropriate, provided we can be sure the list of behavioral objectives is well-selected and complete. In general, to the extent that relationships among stated objectives can be specified in advance, the behavioral objectives approach is appropriate; to the extent to which these relationships are unknown or to be worked out, another approach is needed. Most educational reform movements espouse purposes of the second sort.

A second problem with the statement of objectives, behavioral or otherwise, as an expression of purpose and direction in curriculum development is that there is no way to intelligently revise the objectives once development has begun. The objectives are the criteria by which success in all else is judged, so there remains no way to judge them. Task analysis may be used, but this does not allow for such major changes in direction as deciding that a task once thought to be relevant and important is in fact irrelevant or unimportant. Furthermore, as before, task analysis is not always possible. There is something of an act of exploration in curriculum development and this exploratory aspect is slighted when the results of the exploration must be stated in advance. Generally speaking, to the extent that it is unlikely that evidence would turn up that would cause one to change direction, stating behavioral objectives in advance may be an appropriate technique. But to the extent that one expects many changes (and elaborations, articulations) of direction in the course of, and as a consequence of, one's attempts to attain these purposes, behavioral objectives are not appropriate and another approach is needed.

A number of authors have questioned whether the behavioral objectives approach to curriculum development is viable under any circumstances. (See MacDonald-Ross (1973) for a comprehensive critique.) This is not the question that concerns us here. Behavioral objectives may well be valuable in many situations. We are trying to describe an alternative procedure that is more suited to the early stages of curriculum development than the behavioral objectives approach.

Figure 1 is a flow chart of the behavioral objectives approach to development as outlined by Tyler (1950) among others. It shows that development begins with educational objectives stated in terms of the observable behavior

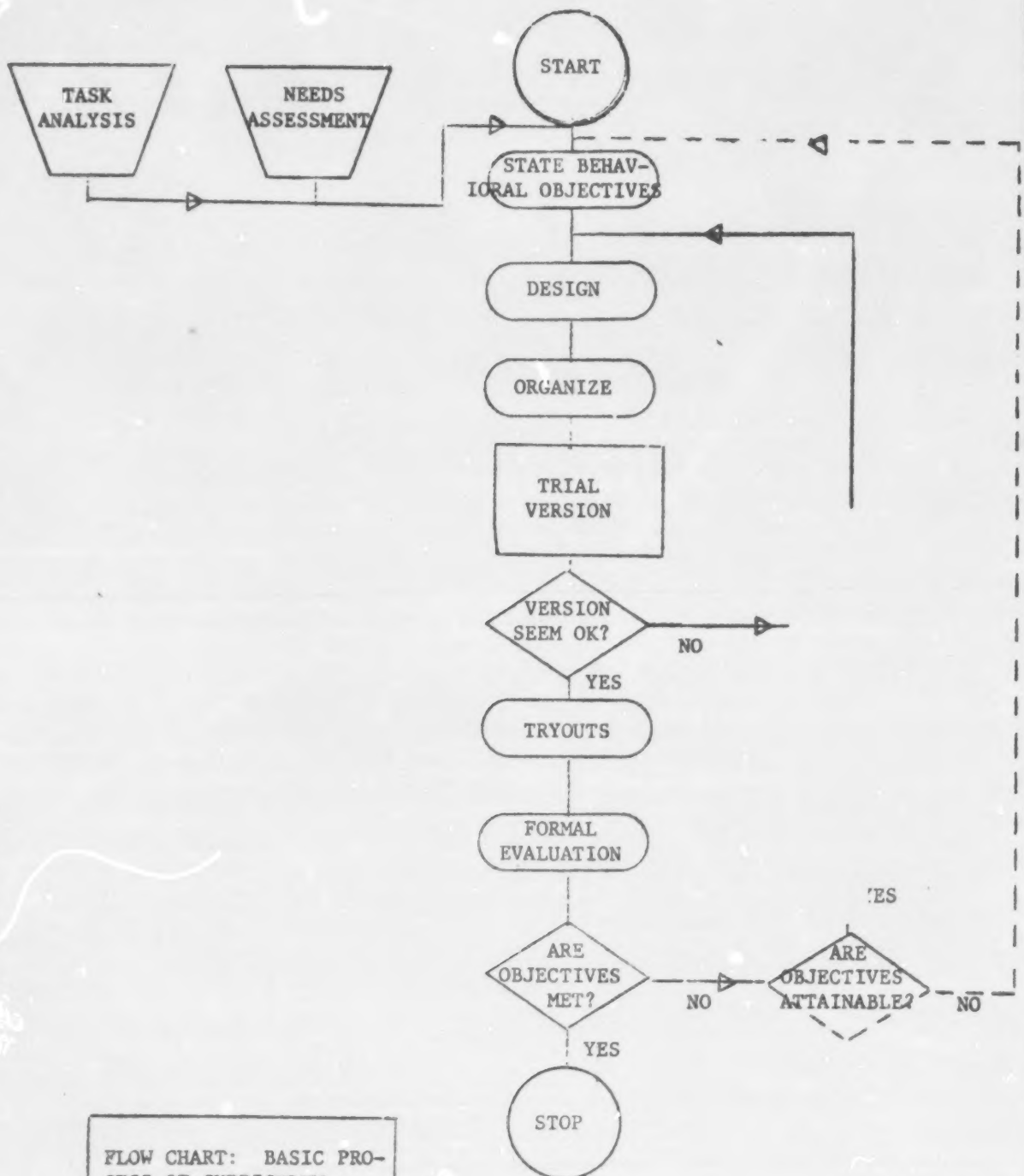


Figure 1

to be exhibited by students after their encounter with the developed plans and materials. Although informal processes, such as "needs assessment" or formal ones such as task analysis may precede the statement of objectives, normally in this model development begins with the statement of objectives.

Learning experiences or learning activities are then devised which are intended to attain the objectives stated. These are organized in a fashion intended to be optimal, and then tried out with students. The curriculum is evaluated by assessing the extent to which it has led students to attain the stated objectives. If it is not successful in this, new learning experiences are designed. Only if repeated failure or other evidence indicates that the stated objectives might be impossible to attain are they questioned.

Figure 2 shows a similar schematic model of development following the procedures we propose. It shows that developers begin with a comprehension of the limitations set by the funding agency (e.g., ages/grades of students, subject matter, scope of program, etc.), with a general sense of their purpose and direction in development, with an array of cultural resources (e.g., knowledge of the subject, of teaching techniques, of techniques for materials construction, etc.) and with other skill and information as starting points. With these as starting points they engage in extended discussions whose purpose is to secure agreement among the members of the group on their starting points and to begin sharpening and elaborating them into a set of working commitments called their platform. The platform consists of tentatively-held and somewhat vague goals, aims, or objectives, various ideas, concepts, and theories about learning, about the subject matter, and about other important facets of the educative process and some models of plans, materials, and development procedures which the group agrees are exemplary.

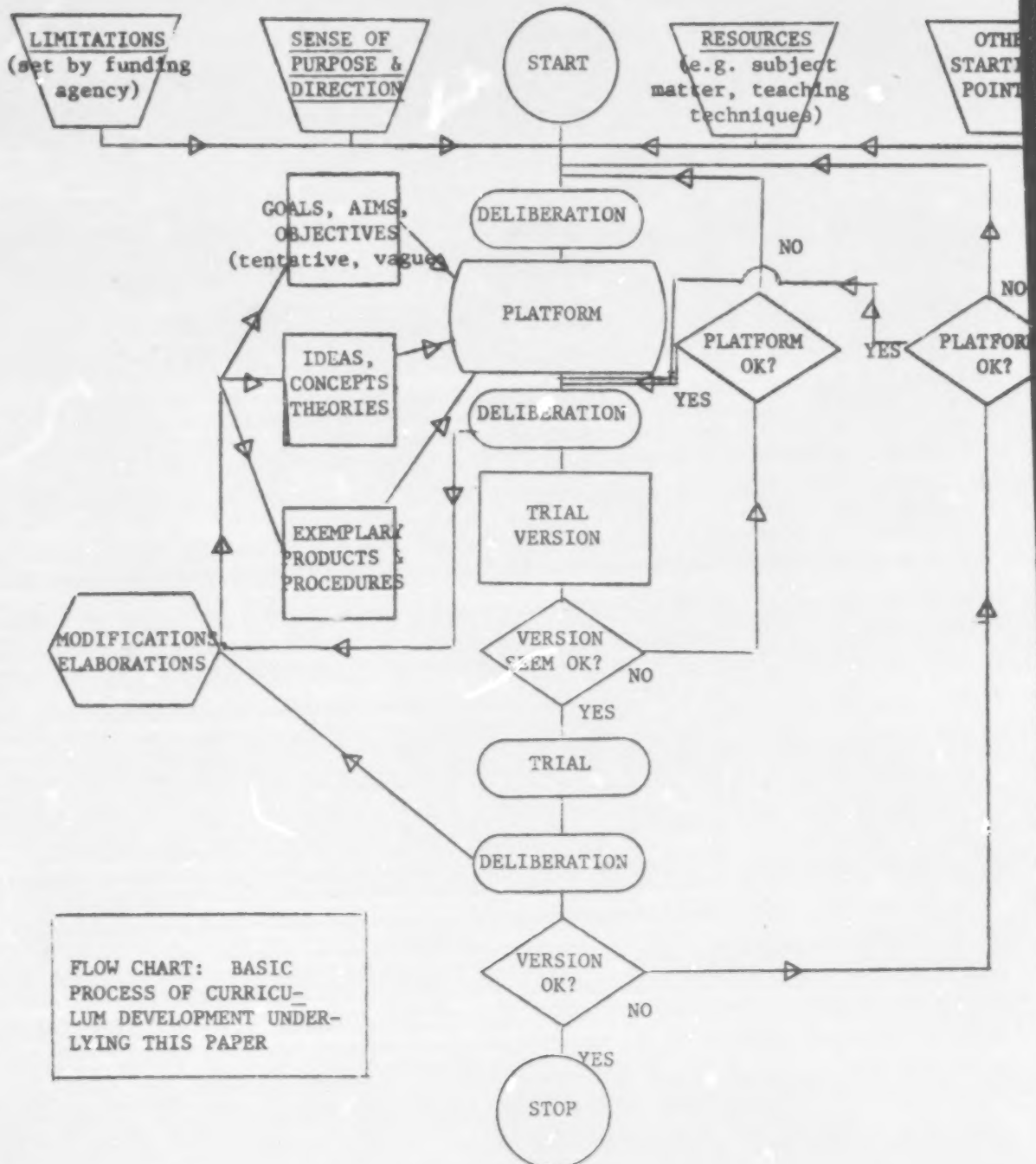


Figure 2

Out of this deliberation there emerge ideas for trial versions of materials which are developed into detailed plans and prototypes. These are then examined in detail by the members of the team and the merits of each version discussed. If a version is not satisfactory (because it is not compatible with their platform, not feasible, or has some other liability) then it may be modified, and a new version produced. If, on the other hand, the trial version seems fully to embody some aspect of the platform and yet remains unsatisfactory, the team will direct its attention to that portion of the platform and possibly modify it.

When the team is satisfied on internal grounds that a trial version is consistent with their intentions, they will put it to trial with students, observing the materials in action, attending to any test results or other formal measures that may be appropriate, and keeping a sharp eye out for the unexpected. The findings of the trial are once again discussed at length. If, after deliberation, it appears that this trial version is essentially sound, development may stop (after, perhaps, some minor adjustments). If, on the other hand, the trial has not been satisfactory, the team will question either the plans and materials or the platform or both, depending on their judgment of where the difficulty lies.

Some of the major differences between this model and the earlier one are:

- objectives play a prominent role in the first and a secondary role in the second.
- deliberation plays a prominent role in the second but does not appear at all in the first.
- the second provides for starting points other than, and antecedent to, stated objectives.
- the starting points are not irrevocable commitments; they are as revisable in the light of outcomes as much as outcomes are revisable in their light.

Under the best of circumstances flow charts are extremely abstract characterizations of any process involving human interaction. These charts certainly oversimplify and distort both procedures. They are intended not as complete representations of the two procedures, but rather as rough outlines illustrating some important differences between the two procedures. The reader who wishes more detail is referred to the article, "A Naturalistic Model for Curriculum Development" (Walker, 1969).

Given the behavioral objectives model, clearly all a developer can be asked to provide to a funding agency as an indication of what he intends to do with the money is a list of stated behavioral objectives, possibly supplemented by the results of a task analysis or needs assessment. These are all the developer has to show at this early stage, and it is only by use of these (presumably) that further steps can be taken. It would be presumptuous of a developer to specify in advance what shape the plans and materials were to take, because this shape is supposed to be determined by the objectives: the form that best attains the objectives is the one to be chosen. On the other hand, the developer can sometimes show some of the test items to be used in evaluation, since these are supposed to be direct consequences of the stated objectives.

Given the second model, however, a different set of things can be provided. Specific, detailed objectives cannot yet be provided because they are to be produced in the course of the development process. An initial version of the group's platform can be provided, however. This would normally include general goals--for coherence and samples of more specific ones--for clarity. Also, samples of their deliberation, as evidence of their ability to conduct it, as an indication of the sorts of questions they will ask of the intermediat

products of their work, and as an illustration of their platform in action. The funding agency should be able to use these items to make judgments about the worthiness of a proposed development project at least as well as they have been able to use lists of behavioral objectives submitted for the same purpose.

These, then, are the matters we propose that a funding agency should ask for from a potential developer. The following pages supply details.

I. An Extended Statement of the Leading Ideas (Guiding Ideas) to Which the Group is Committed

Any request by a curriculum development group for funds to pursue their work should include a statement of what kind of ideas they plan to work with and use. These ideas should be presented in whatever fashion seems most natural and effective to the developers. The statement might include copies of articles or portions of books already published, if these express the group's ideas as well as or better than they could do in an original piece. It might be expressed in the form of a credo, list of desiderata, dialogue between opposing views, or in any other rhetorical form that is appropriate and convincing. It is, after all, one purpose of such a platform to command adherence and belief from its readers, so an impassioned form of expression is quite proper. On the other hand, if scientific defensibility is an important selling point to the authors, they might want to include careful analysis of scholarly and scientific investigations relevant to their ideas. The main point: express the ideas in the most direct and appealing form possible.

Whatever the form, certain matters should be covered in this statement. These include:

- the central and distinctive terms to be used
- the salient ideals, educational ideals and related social, intellectual, political, ... ideals governing the group's work
- the coverage of the intended curriculum
- the emphasis and approach of the intended curriculum
- the form of the intended products, to the extent that this is predetermined or indicated by the preferences of the group.
- the factors which make the intended curriculum necessary or desirable--
new ideas, newly discovered techniques, newly recognized problems, ...

II. An Analysis of the Salient Features of a Curriculum Product Considered Exemplary

One item that should be included in any request for funding for curriculum development is a careful analysis of a curriculum product (plan, apparatus, text material, ...) that the planning group considers to be an example of the sort of product they would like to produce. This analysis should:

---- specify the features the group considers most salient in this product's operations

---- explain how each feature contributes to the good effects of the product

In performing this analysis the curriculum developers will be exhibiting their ideas of what a good curriculum product is and how it should work. They will, in the course of their explanations, use their platform ideas. (If not, we would wonder why it is that their leading ideas prove to have no value in enabling them to deal with concrete cases.) They will be illustrating their group's platform in action doing the sorts of things the platform should do, namely, enable them to bring abstract ideas to bear fruitfully on concrete cases and to use concrete cases to expand, elaborate, and improve their stock of abstract ideas.

A salient-features analysis could be accomplished in 5 to 10 pages. All that is involved is an enumeration of the features considered to be important, which should take less than one page, and a brief (one or two pages should be plenty of space) explanation of how and why that feature is important. If a group has been forced by circumstance to analyze a product or plan that does not completely satisfy them, and if they have not had an opportunity to devise a more satisfactory one, they might also point out those features with which they are not completely happy and explain why not. This analysis should not require special research because the platform should provide the explanations needed. After all, this is the purpose of a platform. If it cannot fulfill this purpose, it needs attention and, perhaps, research.

III. A Sample of Deliberations

Requests for funding for curriculum development should be accompanied by a tape recording, transcript, or detailed minutes--comment-by-comment--or an interlude in deliberations during which the developers discuss the merits of some course of action attempting to decide what they should do collectively about some problem or situation. These deliberations are the means by which the group's ideas and commitments are transformed into curriculum products. The quality of the product is critically dependent on the quality of their deliberations, and this sample gives the funding agency a sample of those deliberations to study.

The following pages are a transcript of a brief interlude in the deliberations of the Science Curriculum Improvement Project recorded in 1969. (Ideally, this transcript would be accompanied by identifications of the persons speaking.)

. . . Here is a flat steel spring that looks like this with a clamp at one end and a weight at the other so that it vibrates back and forth like this. Now one can ask the same series of questions all over again with this system except that this time the answers are different. You can ask the question does the length of this make any difference? The answer there again is yes. One can ask does the amplitude of the oscillation make a difference, the answer is again yes, and again a little bit. However, if you ask again the question does the mass, or let's use the term weight make any difference this time the answer is definitely yes. We expect the students will probably be surprised at this result because they will be inclined to think that this is a system very similar to the pendulum, and it is in some respects but of course, the difference is that the restoring force, that is the force that tends to push the object back to its equilibrium position is not gravity this time. So if this system is independent of gravity, therefore the mass of the moving object doesn't cancel out, as it does for the pendulum. So I might just say before we go any farther that the guiding principle . . . oh here we go. You may want to have a look at this. You can see that the number of swings really does change pretty dramatically.

How are kids going to understand that notion that you just suggested to us?

I'm not sure that they will understand. I'd hope that they would understand it. In fact, they understand that gravity is an essential ingredient for this pendulum because we described the interactions and certainly we can tie with this . . . and incidentally the group we've been working with has not had any SCIS in earlier grades so they're not really hep on the terms system and interaction, and so forth. But I think we have to make it clear that for the pendulum the earth is an essential part of the system, and the fact that the interaction between the earth and the weight on the end of the pendulum is the determining thing has to be emphasized. As for this system the earth is not really essential, except for the trivial sense that the earth gives you a platform to stand on. So that, for example

There's also a little pendulum action there.

Oh, yeah. It doesn't swing in a directly horizontal plane, right? So that in that sense the motion is not as simple as what we talked about.

They might be confused by the length there, what are you measuring from? Are you measuring from the pivotal point to the ball? Or from the brass ball to the tip of the vibrating arm?

Right. Well, now again that's something that we can investigate and there are a lot of different directions you can go from this. You can ask what is the important thing in determining the number of planes in 30 seconds? Is this the important dimension? Or is this the important dimension? And we can even make the springs of different lengths. We can change the length by actually putting a different piece of steel spring in here. So I might just say that the guiding principles in all of these things has been, in the first place to try to get the children to think about what things are really

of primary importance in deciding how the system operates; what things are not very important, and along with that trying to get them interested in making some reasonable precise measurements so that we try to encourage them with the pendulum, for example, to actually measure the length of the pendulum and actually tell us a number of things in a given interval of time so that we try to underline the importance of making quantitative observations which they're very reluctant to do. This is a real stumbling block.

I'm like Elizabeth . . . laughter.

OK.

How do you make them do it?

Well, I don't know. You see I've only been here since September and it seems to me that what we have to do is simply tell them, now if you really want to describe how this system was built in the first place and how it moves in the second place, you've got to be able to attach numbers to that description. It's not sufficient to say this pendulum swings faster than this pendulum. That's not good enough. We have to try better than that . . . or to say this pendulum is longer than that pendulum. That's a qualitative description but it's not good enough. We have to say how much. We have to describe things as quantitatively as we can. We can even quote Kelvin if you want to and say unless we can put a number on it, we can't understand it. I haven't done that but

Do you give them a reason really other than it's not good enough?

Well, we really haven't.

Or do they feel a need for it?

Well, no. They don't feel a need. And that's the problem.

And then you haven't devised some way in which they feel a need for making it. I know you're really going through an exploratory situation, but the question is can you envision setting up some problem that will necessitate their feeling that they should make this judgment . . . other than you need to have these measurements?

It's good for you.

Right. There certainly ought to be some motivation built into the activities themselves. That's what we're saying. I certainly agree, and I guess the pendulum business is at least a start in that direction, because we ask them to make an observation on the system, and then change the system and make another observation. Now it's not so easy if you make just a small change in the length. It's not so easy to remember how fast the pendulum was swinging before, so you can certainly make a better comparison if you count each time. And if you measure these strings, so that you can compare the behavior of these systems before and after the change in length without having to remember exactly how long it was. So that, well I guess that has to be built into activities.

Another question . . . you know I recall in coming back and forth on the curriculum study that one summer someone here in the study was fooling around with the pendulums . . . Bob Carvers and somebody else. Did you have any of his work to review?

Yes, we looked over everything we could find including several previous exploratory work and it was on that basis that I decided that you could not take two pendulums of the same length one with the lightweight, one with the heavyweight, and clock each one for 30 seconds and make the comparison. We decided that that wouldn't work because the children would always find a difference, often as not because they miscounted the swings or if not because their attention wandered, or one thing and another.

You didn't try this then?

No, we didn't try that and I'm afraid that's my fault. I felt that making a direct comparison between two pendulums is a more meaningful kind of thing to do and it seemed that potentially it would circumvent a lot of these problems that a lot of people had run into. I might mention there's an exactly analogous thing in a simpler situation, namely free fall of two different objects a lightweight and a heavy weight from the leaning tower of Pisa type thing. And you ask people does the heavy one get to the ground first or does the light one get to the ground first. And everyone else's observations that we read about first before we tried this thing, indicated that people would invariably say the heavier weight hit the ground first irrespective of what actually happened, because this is a built-in prejudice. Now interestingly enough some in the group said that wasn't what they expected and that probably the reason that wasn't what they expected was that they had read in a science book someplace that Galileo dropped two cannonballs off the leaning tower of Pisa and he found, lo and behold, that they hit the ground at the same time. This proved this result that they learned it previously. Whether they understand it or not is another question, but they vote this result. Anyway, my approach to the pendulum problem was inspired partly by Bob Carpers's innovations on the falling objects. And what he suggested doing about the falling objects was asking the children, all right, if they don't fall at the same speed, how much higher do I have to hold this. If you really think the heavy ball is going to fall faster, then if I hold it a little higher it has farther to go. So how much higher do I have to hold it in order for the two balls to hit the ground at the same time? And it turns out, if you approach the situation from that back door, you find the difference in height is zero.

Do you consider it important that there be something inherent in these experiments to provide a motivation for kids to want to do it?

Yes. I think so. It has to have some empirical significance.

Related to their everyday experience. In fact, why would a kid want to find the answers to this pendulum experiment, or that pendulum experiment?

Well, I don't know.

Or do you consider it important?

Yes, well I think it's important because otherwise they won't be interested in the activities and I think it's certainly important that they have direct contact with the activities. All we're able to do with the pendulum, and I guess it's enough, is to point out that there are some real-life situations involving the pendulums. Clocks have pendulums, too, and the swing of the pendulum determines how fast the clock runs and in the playground there are swings and the swing is really a pendulum. You are a pendulum. Yesterday we opened the discussion with this kind of thing. It certainly is a problem and I think you have to have an activity that for some reason or other either has some intrinsic interest or else something that immediately attracts their attention in a constructive sort of way. When I say constructive sort of way, I mean there are activities which attract their interest in a nonconstructive way. I'm think of something that occurred a few months ago, looking at free fall again with blown-up balloons, that is that's what we intended to try because the fact is, falling objects don't always fall at the same speed if you don't have a situation where you can neglect everything and it turned out, the balloons were so interesting as objects, themselves, to play with, that the experiment never got off the ground. And the kids spent the whole hour just playing with balloons. You know, you blow them up and then you let them go, or you stretch the neck till they squeal and stuff like that.

I'd like to comment on one aspect of your question. I gather, or you imply, that they would be interested if it had something to do with common experience

Or if something which relates to them personally, yes.

I would be. I would make a generalization, that if you want to get them interested you don't start with common experience. You start with deviation from common experience. Common experience is already scarred into their scheme and they're no longer curious about common things.

Well, right. But by common experience, I don't mean things they know the answer to; I mean things that they're exposed to each day. For example, their health. They might be concerned about that, now their dress and so forth.

I stress the point I'm making. Everybody says you should relate to common experience. And if I want to lose them on developing ideas about gases, I talk about air. They know about air. They know all about air they want to know. They know all about water they want to know. And the only way to find out really about water is to start with some other liquid. And the only way to find out about air is by learning about every other gas. Then we can come back to air.

You think there's an inherent drive to knowing about water or air?

There's an inherent curiosity, in children, in anything that's new. That's the trouble with familiar things, that they're no longer curious about them. Now there is a point at which one becomes curious again about common things but that seems to me a later stage. First the children have become used to the world and are no longer thoughtful about the things they are used to. I'm generalizing but I think a case can be made for my point of view.

IV. Operational Plans

Requests for funding for curriculum development should include an outline of the activities the curriculum development group plans to undertake during the period of their funding. These plans would normally include:

- timeline of activities (giving projected starting and finishing dates for each major activity)
- budget arranged by programmatic activity
- chart showing distribution of time of principal personnel across various tasks over the time period of the project (projected, of course)
- a schedule showing the points at which updates and revisions of these plans will be formalized and submitted to the funding agency (This recognizes the inevitability and desirability of such revisions.

Following the plans outlined should lead to revision.)

These plans should include development, trial, revision, implementations, and final summative evaluation, if the group is asking for funds for all these activities.

- vitae for all personnel list of additional personnel to be sought and the competencies needed but not now available to the group.

How this information can be used to make a judgment of the merit of the curriculum development project being proposed.

I. The Platform

The platform can be viewed as an indicator of the intellectual direction the group will take in their subsequent work. It therefore permits the reader to judge the extent to which their direction is consistent with the intended aims of the funding agency. Or, if the agency's aims are malleable, whether the agency's representatives share the group's enthusiasm and commitment to these directions.

It can also be viewed as an index of the intellectual resources accessible to the group for their task. Viewed in this light, judgments become possible of the extent to which this set of ideas and commitments are likely to carry the group through to a reasonably successful conclusion. If, to take an extreme example, the set of ideas is thin and inconsistent, one would hold out little hope of successful materials development from the group. More likely the platform statements will enable a variety of judges to make informed estimates about whether a group of people working on these assumptions are likely to run into serious or even insurmountable problems in the course of their work. Thus, a psychologist might be able to make judgments about the adequacy of their (implicit or explicit) models of classroom learning to the task they set themselves. (The psychologist should be careful not to throw cold water on a proposal just because it isn't psychologically sophisticated. In fact, he might well refer the project to books that would help them become familiar with the professional versions of the amateur psychological models they are using.) Also, a subject matter specialist could testify to the originality, rigor, soundness, ... of the approach taken to the subject matter. And so on.

II. The Analysis of the Salient Features of an Exemplary Curricular Product

An analysis of salient features, which consists of identifying the features and explaining how each contributes to the desirable effects of the product, permits the funding agency to make a judgment of the skill with which the group employs its shared ideas in dissecting the salient features of a curricular product and in showing how these features contribute to its effectiveness. In their later work, the group will need to give each product they consider just this sort of detailed examination; this sample gives the funding agency a preview of the skill with which they carry out such an analysis.

Also, this analysis, if it is skillfully done, permits the funding agency to judge the adequacy of the platform to the development task. If the platform ideas are not useful in the detailed analysis of the salient features of the curriculum product the group judges most nearly like what they would like to produce, then there is reason to doubt whether that set of ideas will be much help in their work. In this event, it might happen that the funding agency would decide that the actual ideas the group uses are different from the stated platform. This would, presumably, be a weakness, though the funding agency might like the ideas used more than they like those stated. More likely the strengths and weaknesses of the platform will be highlighted when it is employed in such an analysis.

III. The Sample of Curricular Deliberation

The primary use of this sample should be as an indicator of the group's skill in using the ideas it is committed to and as an indicator of the adequacy of those ideas to the task being undertaken. But the sample can also be used to judge the group's effectiveness at the more formal and interpersonal aspects of deliberation. For example, one of the most important things to examine is the extent to which the group seems to find a useful mean between perseveration on one or a few desiderata or flits about from one to another, spending too little time and imagination tracing consequences and estimating their value by different criteria. To which extent do members of the group concern themselves seriously with the problems discussed and to what extent do they view the situation as an occasion for self-glorification, etc.? (Of course, some degree of the latter is to be expected.) Do members contribute different competence and expertise and do others treat these contributions seriously but critically? etc. Are any important viewpoints systematically absent from the discussion, as for example, if no teacher-viewpoint were expressed even though the topic called out for such a view?

IV. Evidence of Ability to Profit from Try-outs

A major proportion of the work of a curriculum development group consists of trying out preliminary versions of their plans and materials and assessing both the extent to which they did what was hoped and the extent to which the hopes, when realized, seemed genuinely worthwhile. All facets of a curriculum developer's ideas and practices should be open to change if when conscious awareness is achieved of what these are like in practice, they seem deficient in important ways. This means that materials and modes of instruction should be tested by the planners in person and in concrete detail, in addition to any test instruments or other formal data collection instruments that may be used.

To provide evidence that a development group is capable of profiting from such tryouts, it is desirable to have them submit with their requests for funding the following items:

- description of preliminary materials they have already tried out
- outline of procedures employed to confront the developers with the materials in use in situations like those for which they are intended
- records of subsequent deliberation on the effects of the materials as reflected in the performance of the teachers and students who use them
- records of subsequent changes and reformulations made in light of what was learned from the trials.

Such a request demands that the development group finance preliminary development and testing on their own. Therefore, an ideal procedure would ask for this evidence at the end of a preliminary first year of funding.

The staff who evaluate these submissions should look for:

- evidence of attention to a wide array of considerations, including institutional characteristics and their influence on the materials-in-use, capacities and abilities of the children, ...
- evidence of willingness to examine and question the adequacy of basic principles in light of experience with them
- evidence of presence of adequate human skills needed for this process, e.g., capacity to put aside personal animosities, absence of excessive domination by the leader, ability to recognize and honor a variety of contributions and opinions, etc.

6

A PRACTITIONER'S GUIDE TO FORMULATING A CURRICULUM DEVELOPMENT PROPOSAL

Prepared for the School-based Division of the
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This guide is intended to help any group or individual having ideas for curriculum revision to shape a curriculum development project that embodies those ideas and to prepare a prospectus that exhibits the strengths and limitations of the project as clearly and completely as the still-evolving character of initial ideas and plans permits. It is divided into two parts. The first part presents a simplified model of the process of curriculum development. In presenting this model we do not mean to exclude other methods of curriculum development, but rather to describe one frequently-used method we believe to be suitable for a wide variety of problems and situations. The ideas introduced in this first part are then used in Part II to suggest five ingredients of a prospectus that will describe the projected development work in sufficient detail to enable a funding agency to judge its merits. We suggest that the Guide be read straight through rather quickly first, to get the general idea, and then reread as necessary to absorb details.

PART I: A MODEL FOR CURRICULUM DEVELOPMENT

I. Overview

Curriculum development is a highly complex process. It requires knowledge of the subject matter to be taught, familiarity with the situation and population for which the curriculum is to be designed, proficiency at writing, at preparing visual or other nonverbal materials, skills in group work, the administrative and political insight and skill to carry ideas through to action in a complex school system, and a host of other talents and skills. We cannot hope even to touch on all these essential ingredients. All we propose to do is to offer you some advice on how your initial ideas can be formulated into a curriculum development project. We do not attempt to show you how to get such ideas; we assume you already have in mind ideas for curriculum revision. We also assume you know a good bit about schools and about curricula. We do not address questions of implementing curriculum revisions, evaluating them, or except indirectly, organizing and carrying out a curriculum development project. We are only concerned in this guide with how you can transform your initial ideas into a viable, concrete proposal for a curriculum project.

We will begin with a discussion of deliberation, the process by which all the hard decisions in curriculum development are made. Then we will look at the starting points, the ideas and resources with which development begins. Chief among these starting points is the group's shared platform. After discussing what is normally included in a curriculum platform, we will suggest how it is used in the creation of preliminary versions of curriculum products and in tryouts and evaluation of these culminating in

the final curriculum product. Readers familiar with flow charts might turn immediately to Figure 1 at the end of Part I. This Figure diagrams the model to be presented in Part I. For other readers the diagram might be more confusing than helpful at this early stage in the explanation.

II. Deliberation

Deliberation--discussion of the reasons for and against alternative courses of action--is the essence of curriculum development. It is the means by which ideas interact with practice. Deliberation is familiar to everyone as the way juries reach verdicts once they have been shown the evidence and given the arguments. It is also used widely in other practical fields. In education, deliberation about the merits of particular programs is also common. For example, many groups of educators have deliberated the value of Sesame Street. Studies have indicated 'Big Bird' can help children learn the alphabet. Some scholars have argued the show's format hampers the development of a child's concept-ratio span. Some socially conscious educators wonder if Sesame Street gives yet another unfair advantage to the white middle class child, who is more likely to watch Sesame Street. What are the trade-offs? What would the child be doing otherwise? What is being neglected? What are the alternatives?

Deliberation is most useful as a way of handling complex problems; simple problems can be solved without it. In curriculum deliberation, developers make a host of difficult curricular decisions through discussion and argument that takes into consideration a spectrum of educational factors. It is important to understand deliberation and what makes it good or bad because to a large extent the quality of deliberation determines the quality of the curriculum.

Curriculum deliberation may include a variety of types of dialogue. Frequently it consists of arguing over some disputed issue. One member of a curriculum development team may argue for the development of a hard bound textbook, pointing out its durability. Another member may argue

against this on the ground of expense. Another may raise the consideration that pamphlets are more familiar and less intimidating to students. And the discussion may continue in this argumentative way over the merits of various formats for the project's publications. Or, deliberation may take the form of brainstorming sessions in which members throw out ideas in a spirit of helpful suggestions rather than argument. Both sorts have their place and their advantages. Still another sort of discussion that frequently occurs during curriculum deliberation is explication by one or a few members of ideas that they are especially expert with or concerned about. Others may then participate by asking questions or making suggestions. Through these and other forms of discussion, ideas are sharpened and difficult decisions are made.

Curriculum deliberation may and usually does take place on any and all important questions that arise in the course of development. These may be as imposing as 'How do students learn?' or as mundane as 'Do we want to use photographic slides or printed reproductions?'. The best deliberation does not deal exclusively with either very abstract 'ultimate questions' or very minute 'trivia', but sweeps back and forth from the abstract to the concrete, making sure that details are consistent with broader ideas and that the broader ideas are really helpful with practical decisions and not just so much high-sounding wind.

A certain amount of interpersonal conflict is essential to deliberation. Without the clash of contending views, alternatives would not be examined and compared. But the level of conflict should not be so great

as to impair the group's work, and it should be confined as much as possible to the issues themselves and not to personalities.

Also, free participation is essential. Prematurely closing off discussion and suppression of competing views also inhibits the exploration of alternatives. But discussion cannot continue forever; work must proceed. And so there is inevitably a tension between the desire to hear all opinions out and the desire to get on with the work and this tension can be a source of group dissatisfaction, especially if one desire wins out over the other all the time. For such reasons as these a curriculum development group is well advised to attend to group processes and to group functioning as well as to the curriculum development task at hand.

Here is a brief excerpt from the deliberations of an actual curriculum development team. They are designing activities to teach science to elementary school youngsters.

... Here is a flat steel spring that looks like this with a clamp at one end and a weight at the other so that it vibrates back and forth like this. Now one can ask the same series of questions all over again with this system except that this time the answers are different. You can ask the question does the length of this make any difference? The answer there again is yes. One can ask does the amplitude of the oscillation make a difference, the answer is again yes, and again a little bit. However, if you ask again the question does the mass, or let's use the term weight make any difference this time the answer is definitely yes. We expect the students will probably be surprised at this result because they will be inclined to think that this is a system very similar to the pendulum, add it is in some respects but, of course, the difference is that the restoring force, that is the force that tends to push the object back to its equilibrium position is not gravity this time. So if this system is independent of gravity, therefore the mass of the moving object doesn't cancel out, as it does for the pendulum. So I might just say before we go any farther that the guiding principle ... oh here we go. You may want to have a look at this. You can see that the number of swings really does change pretty dramatically.

How are kids going to understand that notion that you just suggested to us?

I'm not sure that they will understand. I'd hope that they would understand it. In fact, they understand that gravity is an essential ingredient for this pendulum because we described the interactions and certainly we can tie with this ... and incidentally the group we've been working with has not had any SCIS in earlier grades so they're not really hep on the terms system and interaction, and so forth. But I think we have to make it clear that for the pendulum the earth is an essential part of the system, and the fact that the interaction between the earth and the weight on the end of the pendulum is the determining thing has to be emphasized. As for this system the earth is not really essential, except for the trivial sense that the earth gives you a platform to stand on. So that, for example ...

There's also a little pendulum action there.

Oh, yeah. It doesn't swing in a directly horizontal plane, right? So that in that sense the motion is not as simple as what we talked about.

They might be confused by the length there; what are you measuring from? Are you measuring from the pivotal point to the ball? Or from the brass ball to the tip of the vibrating arm?

Right. Well, now again that's something that we can investigate and there are a lot of different directions you can go from this. You can ask what is the important thing in determining the number of planes in 30 seconds? Is this the important dimension? Or is this the important dimension? And we can even make the springs of different lengths. We can change the length by actually putting a different piece of steel spring in here. So I might just say that the guiding principles in all of these things has been, in the first place to try to get the children to think about what things are really

of primary importance in deciding how the system operates; what things are not very important, and along with that trying to get them interested in making some reasonable precise measurements so that we try to encourage them with the pendulum, for example, to actually measure the length of the pendulum and actually tell us a number of things in a given interval of time so that we try to underline the importance of making quantitative observation which they're very reluctant to do. This is a real stumbling block.

I'm like Elizabeth ... laughter.

OK.

How do you make them do it?

Well, I don't know. You see I've only been here since September and it seems to me that what we have to do is simply tell them, now if you really want to describe how this system was built in the first place and how it moves in the second place, you've got to be able to attach numbers to that description. It's not sufficient to say this pendulum swings faster than this pendulum. That's not good enough. We have to try better than that ... or to say this pendulum is longer than that pendulum. That's a qualitative description but it's not good enough. We have to say how much. We have to describe things as quantitatively as we can. We can even quote Kelvin if you want to and say unless we can put a number on it, we can't understand it. I haven't done that but ...

Do you give them a reason really, other than it's not good enough?

Well, we really haven't.

Or do they feel a need for it?

Well, no. They don't feel a need. And that's the problem.

And then you haven't devised some way in which they feel a need for making it. I know you're really going through an exploratory situation, but the question is can you envision setting up some problem that will necessitate their feeling that they should make this judgment ... other than you need to have these measurements?

It's good for you.

Right. There certainly ought to be some motivation built into the activities themselves. That's what we're saying. I certainly agree, and I guess the pendulum business is at least a start in that direction, because we ask them to make an observation on the system, and then change the system and make another observation. Now it's not so easy if you make just a small change in the length. It's not so easy to remember how fast the pendulum was swinging before, so you can certainly make a better comparison if you count each time. And if you measure these strings, so that you can compare the behavior of these systems before and after the change in length without having to remember exactly how long it was. So that, well I guess that has to be built into activities.

III. Starting Points

There is no one way for curriculum development to begin. Where and how it begins is largely a matter of accident, which is the same as saying it is determined by so many factors that we have no hope of accounting for them all. Many writers argue that curriculum development should begin with objectives. Some projects do begin this way, but many others do not. Also, projects that begin with objectives also usually have additional starting points--theories of learning to which they are committed, a 'philosophy' or 'approach' or 'viewpoint' to which they are committed, etc. These additional starting points are usually overlooked, but they should not be. These initial preferences, commitments, ideas, etc., are both the raw material from which a more explicitly deliberate and coherent platform is built, and the intellectual tools--gradually becoming sharper through constant rubbing against one another and against the processes and products of development--by means of which the plans and materials are developed.

Your development project might begin with a school problem, such as drug abuse, and try to build a curriculum that solves or eases the problem. In this case, your team of developers might begin with strongly-held beliefs about the causes and likely cures, or they might do some investigation first to find them. But before materials can be developed, the team must have some definite ideas about the problem they are trying to solve and about likely solutions to them. Alternatively, your project might begin when a teacher among you discovers a strategy that seems to work exceptionally well in teaching youngsters, say, mathematics. In this case, the project

is committed to this strategy and seeks to extend it, develop it, refine it, and build an entire program around it.

The precise initiating factors in curriculum development are unpredictable, highly various, and dependent on the purposes and interests that bring your curriculum development team together, the situation they face, and numerous other factors. But, whatever the precise initiating factors, several important matters will almost always need early attention. These are somewhat predictable and common to a wide variety of projects and therefore deserve the name 'starting points' of development. Major starting points include: resources (needed and available), knowledge of the educational situation for which the curriculum is intended, and the group's shared sense of direction and purpose.

Important resources include: knowledge of subject matter, knowledge of teaching techniques, of students' characteristics and backgrounds, of such philosophical considerations as the ends of schooling, the nature of the good life and the good society, etc. Also, knowledge and skill in designing curriculum materials and evaluating them is an important resource. And, of course, money is needed to pay participants and consultants, to purchase supplies, and so on. Access to classrooms and schools where preliminary versions may be tried out is another important resource. The resources available to the development team limit what the team may undertake and accomplish, even though these limitations can be stretched somewhat through such measures as hiring consultants to supplement the team's knowledge and skill.

Before development itself can truly begin, the developers must be acquainted to some degree--and the more the better, usually--with the range of educational situations for which their product is intended. This includes such dimensions as the age of the students, their previous knowledge, the type of school and community, their previous educational history, and so on. It also includes the characteristics of the problems for which your curriculum is to be a solution: drug abuse, poor reading, out-of-date ideas in science and mathematics, and the like. Generally the development team is acquainted at first hand with at least a sample of the situations for which their curriculum is targeted. This experience is valuable in many ways, for example, in judging whether some proposed course of action is even worth trying out. Occasionally this first-hand, informal awareness is supplemented by more formal data and investigations.

The group's sense of a shared direction and purpose is what keeps them together, what molds them into a working unit. The team member's sense of purpose and direction develops independently in each of the members over their entire careers, but when they come together they usually recognize similarities in their views and this recognition highlights the remaining differences. Through discussion and joint action, the degree of commonality in views is further increased. Generally, but the time the team sits down to work formally, they share a great many commitments and assumptions about what education is, what it should be, how the specific problem that concerns them should be viewed, and what should be done about it. These shared ideas and commitments give the group its unity of purpose and

direction. In the early stages of development, this sense of a shared direction and purpose is the heart of the project.

Whatever the concerns that spark a development effort, these three starting points--resources, acquaintance with the educational situation, and a shared sense of purpose and direction--must be present before its actual work can begin.

IV. Platform

We have seen that developers often begin curriculum construction with a shared view of the educational situation for which their program is to be designed, with a general sense of their purpose and direction in development, and with an array of resources, including skill and information. From these starting points, developers begin sharpening and elaborating this set of working ideas into a platform. A curriculum project's platform is the system of beliefs and values that the curriculum developers bring to their task and that guides the development of the curriculum. This platform is basic to the curriculum development process and, as its name implies, is the foundation for the rest of the structure.

You are probably familiar with the term political platform. It is an internally consistent public statement of beliefs and assumptions about a variety of social, economic, legal, and other ideals and realities which a candidate or party supports and promises to act upon. Similarly, the assumptions and beliefs which the curriculum design team accepts and which justify their choices constitute the curriculum's platform. Just as a political candidate or party has to make a series of vital choices which are basic to a proposed program, so will your group have to make a series of critical choices. These choices will determine the nature of your finished curriculum project. Your choices, of course, will not proceed randomly or arbitrarily. Rather, they should be made systematically, and with some rational basis. These choices and the assumptions that justify them constitute your curriculum platform. The platform, then, is the set

of working ideas and beliefs from which curriculum designers proceed in developing new materials.

You have probably noticed that the platform closely resembles the shared sense of purpose and direction mentioned in the previous section of the Guide. They are indeed very similar, the chief difference being the degree of explicitness and articulation. A curriculum development platform, like a political platform, is meant to be in the public domain, accessible to anyone. Of course, no group is ever completely successful in expressing publicly all its shared ideals and assumptions, but the ideal to be striven for in platforms is complete, public expression of the initially unarticulated, subjective, and dimly perceived sense of shared purpose and direction. To emphasize the ideal that platforms are public statements, we will speak of them as if they were written documents, though no development group ever in fact writes down more than the basic elements of their platform.

Although we can easily define platform, specifying its component parts is a more complex task. Platform considerations may be usefully divided into two basic groups: first, certain abstract, philosophical and theoretical matters--namely ideals, theories, and aims; and second, a number of more practical matters.

An integral part of the platform is a statement of several relevant educational ideals held by the group, and which they plan to use in constructing the curriculum. An ideal is a guiding principle stated in very general terms. It may have a philosophical, social, psychological, or

political basis. For example,

We feel that a Language Arts Curriculum should reflect the culturally pluralistic society in which we live. An educational program should embrace the concept of cultural democracy and must find a way to include all forms and types of language expression.

You will certainly want to indicate the general ideals that you hope the proposed curriculum will embody. Specific statements about your project's goals will also be useful. They can be stated as specific purposes or as more broad and general aims. An example of a broad or general aim might be:

the purpose of the proposed curriculum is to construct an innovative language arts unit which focuses on the viewpoints expressed through poetry of selected non-mainstream Bay Area minority groups. Through poetry this unit will make the student more aware of cultural differences and similarities experienced across cultures and on different experiences unique to a particular culture.

You may also be committed to using certain theories about some important phenomenon. For example, developers of a pre-school reading program may want to use a Piagetian theory of cognitive development.

The following are some of the practical considerations that you will need to agree upon in order to construct your curriculum.

Appearance: At some point in your curriculum planning it will be useful to imagine what your curriculum will look like. It may be useful to analyze the form of comparable curriculum plans or materials developed by other groups. A decision that all the project's materials should be able to fit into a shoe box will affect many other curricular decisions.

How the curriculum will work in use: Do you expect children to be able to work on the curriculum by themselves? What roles will the teacher play? Who will control decisions about what is to be learned, the student or the teacher? What will be the balance of "power"? Will this curriculum be optional, auxiliary, central, or enrichment?

Evaluation occurs continually in the kind of curriculum development described here. Curriculum developers continually analyze and assess their work. But this informal evaluation needs to be supplemented by more formal and systematic evaluation. Your choices of means of evaluation will affect the information available to you about how your preliminary versions work. How will you evaluate your progress during the development of the curriculum? How will you evaluate your final results?

Development procedures: Your platform should also indicate what steps you plan to follow in developing your curriculum, your starting points and your plans for translating your platform into actual curriculum materials. What kinds of development plans and procedures do you foresee in the actual curriculum construction? How will you integrate design, deliberation, evaluation? Will you use any specialized techniques of analysis or development?

Scope: Your platform should also indicate the range of or scope of your intended curriculum. You should delineate the extent of the subject matter your materials will cover, as well as the ages, or stages of intellectual, social, physical development of the intended students. Any special emphasis of approaches in your curriculum should also be noted in your platform statement. For example, if your group plans to stress psychomotor development, or discovery learning, you should so state in your platform.

V. Preliminary Versions of Plans and Materials

Even before your development team has reached complete agreement on its platform, you should begin to prepare preliminary versions of elements of your curriculum. In preparing preliminary versions you begin to focus on the particulars of your intended curriculum. Questions will arise concerning what to include, for whom, in what sequence, and for what specific purposes. And there will be concern for the nature, format, and array of materials you wish to produce: textbooks, audio-visual aids, teacher resources, equipment, and the like. In addition you will be forced to think about how your products are to be used, and what features to build into them so that they are likely to be used as you think best. For instance, the developers of the noted curriculum MAN: A COURSE OF STUDY, included the following features in each master unit of the course: talks to teachers, consisting of lively accounts of the subject of each unit by great men in the field; queries or contrasts, suggestions for getting ideas across and for getting students to think matters out; documentaries, accounts or tape recordings of ordinary children at work with materials in the unit; and supplementary materials, paperbacks, additional films, and games, etc., that might attract the attention of either a diligent student or an aspiring teacher.

As you develop preliminary versions of your curriculum plans and materials, you must also give thought to the techniques, tools, and process by which to judge their worth. Again, a series of theoretical and practical questions arise. You must select criteria upon which to base your

evaluation. You may wish to test several alternative versions of your curriculum to determine which is most effective, but such procedure is time consuming and expensive so that benefits need to be balanced against costs. And you will want to decide how student progress and performance is to be evaluated. Based on this decision you will need to design the tests and other evaluative measures your group deems appropriate.

Your group may choose one of several methods by which to proceed in developing preliminary versions. The group might develop several alternative versions, then decide after deliberation which seems best. On the other hand, it may be advantageous to design several versions and compare how each works in practice before deciding among them. This latter approach is costly and raises difficult questions about how to compare different curricula, or different approaches within a curriculum. Its advantage, however, is that it secures evidence on a whole range of important questions: Is sequence A more effective than sequence B? What ratio of individual to group work should be maintained? What student assignments produce the most comprehension, the greatest creativity, etc.? Producing preliminary versions requires that you make decisions on these and many other matters, and in making these decisions your platform will be tested in action and probably found inadequate in some ways. For this reason it is not a good idea to attempt to formulate your platform fully before beginning development. Your platform must be secure enough and intensive enough to allow development to proceed, though. Otherwise you will find your team bogged down in discussion of platform and unable to make crucial decisions.

VI. TRIAL

When your group is satisfied that a preliminary version of your materials is consistent with your intentions and platform, trial use is the next step. During this trial your group can observe the materials in use and collect the evidence you need to judge how well they are working. A range of considerations may guide your evaluation. With respect to student learning your criteria may include the following: speed of learning; resistance to forgetting; transferability of what has been learned to new instances; the strain imposed by the learning; or the power of what has been learned to generate new ideas. You may also elicit student and teacher attitudes to the material in terms of their likes, dislikes, relative interest, and so on. Questions of economy such as the cost of materials, and their durability relative to their use may also be raised. You may also want to see how your curriculum works with the various types of students for whom it is intended. You may be interested in a particular age group (6th graders), in an ability range ("slow learners"), in an area (inner city), in an ethnic group (Native American), and so on.

After the trial, your group will want to discuss its evaluation and findings. If, after discussion, it seems that this trial version is sound and appropriate, development may stop. On the other hand, if the trial has brought to light some serious flaws, your team must reconsider either the plans and materials of the trial version, or the platform, or both, depending upon where you judge the difficulty to lie. If revision is needed, your team will need to try out the revised materials, evaluate them and deliberate

upon the results. The trial/deliberation cycle should be repeated until the materials are satisfactory.

The process of curriculum development described in the preceding pages of this Guide is presented in a flow-chart diagram in Figure 1. By beginning at the top of the page in the circle labelled 'START' and following the arrows down the page you can review all the stages mentioned in the text.

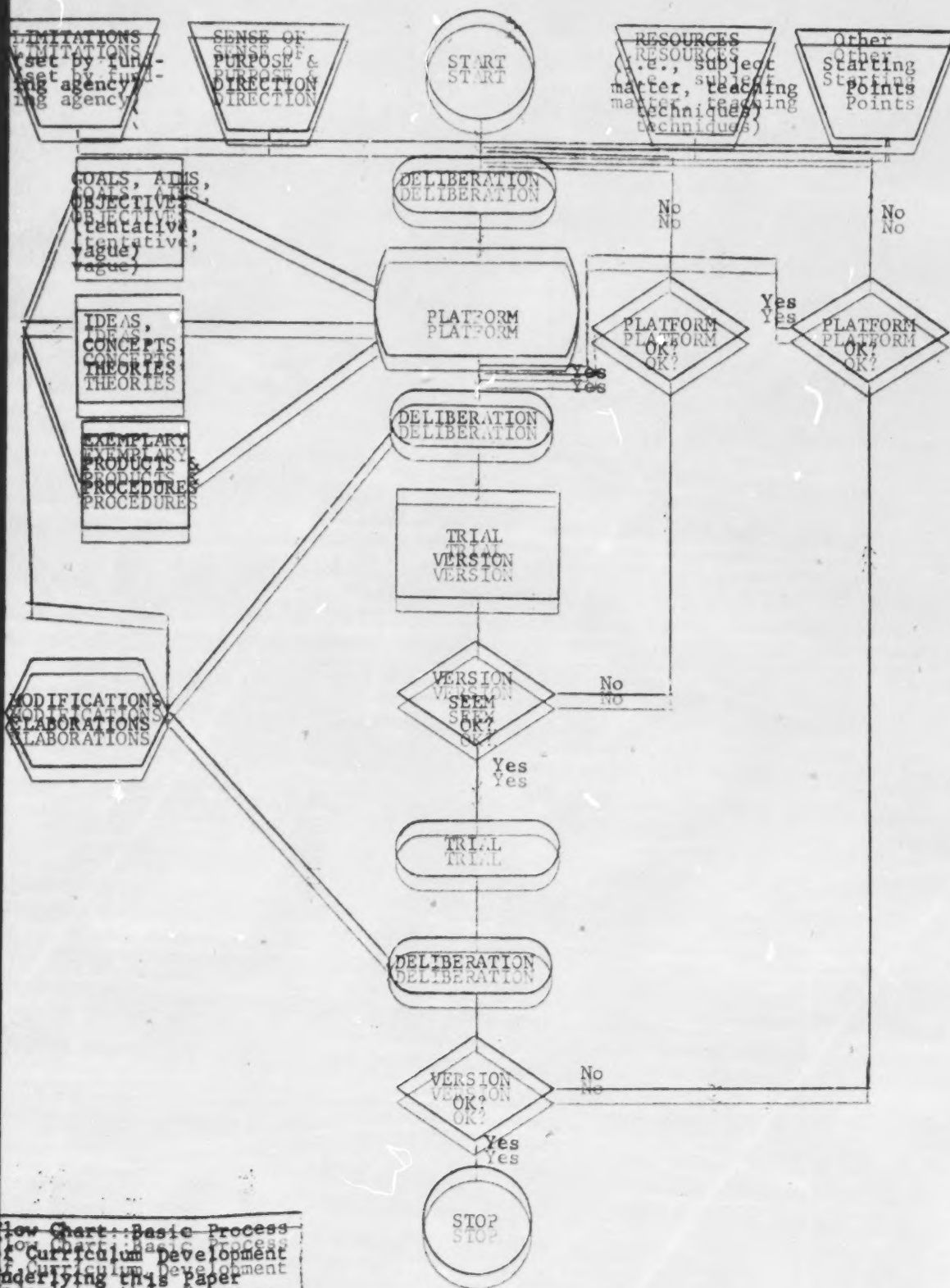


Figure 1
Figure 1

PART II: WRITING A PROPOSAL

This section of the Guide presents an outline that could be used in preparing a proposal to a funding agency requesting support for your curriculum project. The proposal we recommend consists of five basic sections: a platform statement, an analysis of an exemplary curriculum product, a sample of deliberation, an outline of operational plans, and evidence of your team's ability to profit from try-outs. With the exception of the analysis of an exemplary curriculum product, these types of information are a natural part of curriculum development. While good proposals undoubtedly could be written which did not include one or more of these sections, which included additional sections, or which were organized on altogether different principles, we think this pattern provides a great deal of relevant information to the granting agency without making excessive demands on the developers or diverting them from their real work into irrelevant proposal-writing activities. The preparation of a proposal of this sort is, in itself, a good way to begin development.

I. Platform Statement

The funding agency expects a statement of the leading ideas the curriculum development group will work with. The statement is intended to provide a detailed and accurate idea (as detailed and accurate as possible in advance of a project) of what will be attempted, how the attempt will be made, and what a successful result would be like. There is no set format for this proposal statement. It might include copies of articles or portions of books already published, if these express your group's ideas as well as an original piece. You should make the statement in as direct and appealing a form as possible, whether an essay, a dialogue, credo, list, or any other form that is appropriate and convincing. Since one purpose of such a statement is to convince the readers of the significance of the idea, an impassioned statement is quite proper, as is a sober scientific defense of the proposal.

You may want to include a wide range of information in your platform, and the following is suggestive of this range:

- A. Philosophy*
What are your major ideals, educationally, socially, politically, intellectually?
What central and distinctive terms will be used?
- B. Theories*
What theories are you using, whether anthropological, social, political, psychological, historical, theological, etc.:
How do these theories relate to your specific plans?
- C. Goals*
What are your major goals?
What are your priorities among these goals?
What is the relationship of these goals to your philosophy and theories?

* It is in your interest to avoid high-sounding but largely empty statements, as these will prove embarrassingly difficult to apply to concrete decisions. See Section II--'Analysis of an Exemplary Product.'

D. Situation

What is the situation that makes you want to undertake this project?
Does a problem need to be solved, something new created?
Who will be involved when and where?

E. Appearance

As you imagine it, what will your curriculum look like?
How will it work in use?

F. Development and Evaluation

What steps do you plan to follow in developing your curriculum?
How will you evaluate progress and final results?

G. Limitations

What are the limitations to your curriculum? (It may be useful to note some of the things you are not going to be able to do.)
Also, where do members of your curriculum group have fundamental differences of opinion regarding this platform statement? (Spelling out areas of disagreement may be useful in your debate over specific decisions.)

This platform can be viewed as an indicator of the direction your group will take in its subsequent work. It therefore permits the reader to judge how far this direction is consistent with the intended aims of the funding agency. Or, if the agency's aims are flexible, whether they can support your efforts in these directions.

The platform can also be viewed as the store of ideas and assumptions the group will draw on in their work. Then the funding agency can try to judge whether this set of ideas and commitments are likely to carry the group through to a successful conclusion. To take an extreme example, if the set of ideas is thin and inconsistent, one would hold out little hope of successful materials development from the group. More likely, lesser gaps and contradictions will appear. Then readers may be able not only to judge whether a group of people working on these assumptions would be likely

to run into insurmountable problems but also to suggest ways to avoid these problems. Thus, a psychologist reviewing the proposal as a consultant for the funding agency might be able to make judgments about the adequacy of your (implicit or explicit) models of classroom learning to the task you set yourselves. The psychologist would be unwise to throw cold water on your proposal just because it shows weaknesses in this respect. He might well refer you to books that would help you improve the psychological models you are using. Also, a subject matter specialist could examine the original rigor, soundness, etc., of the approach taken to the subject matter, and so on, and perhaps offer helpful advice. A funding agency might select persons from a variety of backgrounds to read your platform. This makes it difficult to specify in advance the criteria by which your platform will be judged. The general considerations mentioned in this section are almost certain to be applied, but the nature of your curriculum and the aims of the funding agency will determine the exact standards against which they will measure your proposal.

II. Analysis of an Exemplary Curriculum Product

Your proposal should also include an analysis of a sample curriculum product. The sample you choose for this analysis should be considered outstanding by your group. It may be drawn from existing curricula or from prototype materials that your team has already produced. In your analysis you should

- (1) provide a full description of the product and how it is used.
- (2) specify the features you consider to be most salient, most important in this product's operation.
- (3) explain how each salient feature contributes to the good effects of the product.

In performing this analysis your team will necessarily show what you think a good curriculum is, and how it should work. This analysis permits the funding agency to judge how skillfully your group uses its platform in development. The application of your platform to this exemplary product also allows them to judge the adequacy of the platform to the development task. If platform ideas are not useful in this analysis, there is reason to doubt their usefulness in developing your curriculum. An appendix to this part of the practitioner's guide provides a detailed series of suggestions for carrying out this analysis, and we refer you to this appendix for further information.

III. Sample of Deliberation

Your proposal should include a tape recording, transcript, or extended minutes--comment by comment--of a session in which your development team discusses the merits of some course of action, attempting to decide what you should do collectively about some problem or situation. These deliberations are the means by which your group's ideas and commitments are transformed into curriculum products. The quality of your jointly created product is critically dependent on the quality of your deliberation, and this sample gives the funding agency a bit of your deliberation to study.

You should select a sample of your group's deliberation which represents its best work. You may wish to submit a single, lengthy sample drawn from your group's work on platform, on selecting and analyzing a curriculum product, on developing prototype materials, etc. Or, you might provide several shorter samples drawn from several sessions and covering a range of topics and tasks.

Broadly speaking, the sample of deliberation will be evaluated with two sets of factors in mind: one referring to group functioning, the other to the substance of the discussion(s). Regarding the former, the funding agency will scan the deliberations for pathologies like those implicit in the following questions.

- Is there wide participation, if this is appropriate, or is discussion dominated unnecessarily and inappropriately by one or two people?
- Does the group stick to the point of their deliberation, or jump about with not enough time allowed to really penetrate a question or problem? Or do they continue to go over and over one point when they might better go on to a new question?

-Do group members argue the merits of a case or do they bring personalities and other irrelevancies into the discussion?

-Do members contribute **different** competence and expertise, and do others treat these contributions seriously but critically?

Regarding substance, the funding agency will search carefully for answers to questions like these:

-Are a good range of alternative ideas and procedures explored? Are **many possibilities objections, etc.** considered?

-Are the **platform ideas** actually used? Do they seem adequate to the task in hand?

IV. Outline of Operational Plans

A fourth item to be included in a curriculum development proposal is an outline of operational plans, consisting of the activities your group plans to undertake during the funding period. Normally included in this outline would be:

- a projected timetable of (1) activities, with starting and finishing dates for each major activity, and (2) dates on which revisions and updates will be formalized and submitted to the funding agency, should this be necessary;
- a budget, also outlined in relation to each major activity;
- a chart of projected distribution of time that principal participants will devote to the major activities, organized by the major activities or by personnel involved;
- a resume (curriculum vita) for each participant giving related work and educational background and a list of additional personnel needed but not working with the group at present. This list could take the form of a description of the competences required for the task(s) that are not covered by the participants. For instance, you may need consultants in evaluation and testing, in evaluation of media, or in the subject matter field of your curriculum.

These operational plans should take into account the major activities-- development, trial, revision, implementation, and evaluation--for which the group is requesting funds.

V. Evidence of Ability to Profit From Try-outs

A major proportion of your group's curriculum development work will consist of trying out preliminary versions of plans and materials, and assessing both how well your product did what you hoped and whether your hopes, when realized, seemed genuinely worthwhile. All facets of your group's ideas and practices should be open to change if they seem deficient in important ways when you become fully aware of what they are like in practice. This means that your team should test the materials in person and in concrete detail in addition to using any test instruments or other formal data collection instruments that may be helpful.

To provide evidence that a development group is capable of profiting from such tryouts, it is desirable to have submitted the following items:

- a description of some preliminary product you have already tried out.
- an outline of procedures you employed to confront yourselves with this product in use in situations like those for which it was intended.
- summaries of your subsequent deliberations concerning the adequacy of the performance of these materials in this trial.
- statements of subsequent changes and reformulations made in light of what you learned from the trials.

If your group tried out some materials before submitting a funding proposal, they should submit the material called for here with their proposal. If try-outs are contingent upon the funding, then this material may be submitted at the end of a first year of funding, or sooner if possible.

The purpose of this submission is twofold. First, if your group is having any difficulty with the trial of the preliminary version, the agency may, on the basis of this evidence, help your group to improve its try-out

procedures. Second, this provision acts as a progress report testifying to the quality of your group's preliminary products. Those who evaluate these submissions for the funding agency will look for factors such as the following:

- evidence of attention to a wide array of considerations, including institutional characteristics and their influence on the materials in use, capacities and abilities of the children, etc.
- evidence of willingness to examine and question the adequacy of basic principles in light of experience with them.
- evidence of the presence of adequate human skills needed for the trial process, e.g., capacity to put aside personal animosities, absence of excessive domination by the leader, ability to recognize and honor a variety of contributions and opinions, etc.

Appendix I: Suggestions for Analyzing an Exemplary Curriculum Product

Choosing an Example

There are two ideas to keep in mind when selecting a curriculum product. First, what you choose should have much merit in your group's opinion. Based on your experience with a range of curriculum materials, you should judge this particular product as exemplary in its own right and as consonant with your deepest ideas, ideals, and intuitions about the educative process. Second, you should choose with an eye toward your platform as articulated in your proposal. Your example must be in some measure appropriate to your platform, so that in the analysis of the sample product you are able to use ideas from your platform.

Your platform states certain ideals; your product should embody some, at least, of these ideals. If your platform proposes a particular emphasis and approach to your intended curriculum, your example should illustrate this. If your platform indicates certain necessary and desirable factors underlying your intended curriculum, your example should demonstrate the relevance of these factors. And if you have specified the form of your intended curriculum, your example might be in this form. Many of the central and distinctive ideas, terms, concepts, theories, or models in your platform should be applicable to the analysis of your example. The point to keep in mind is twofold: that those dimensions of curriculum stressed in your platform be clearly exhibited in your sample product; and also that you believe in and value the product you choose.

You may consult a number of sources in your search for an exemplary curriculum product. Teachers in a local school district, a school's media center,

and materials provided by publishing companies and other education related businesses are some obvious sources. Schools of education at local universities provide access to curriculum materials, reference works, journals and publications, and indexed guides to education literature such as the Educational Index, the ERIC system, and the ALERT system. You might also check with any private firms or foundations in your area that engage in educational research or policy-making. But it is a rare development group that does not have its favorite materials and devices, and generally these will make the most satisfactory examples for analysis.

Do not let the word "product" mislead you. You may select any aspect of curriculum for analysis. This may be a product in the sense of an object: a textbook, film or filmstrip, simulation game, materials for children to manipulate, etc. Or you may want to present an aspect of the teaching-learning process. This might include a set of learning activities or experiences, a teaching strategy, an evaluation procedure, a student initiated project or demonstration, etc. You may wish to indicate an aspect of an educational environment through photographs, architectural drawings, etc. Or provide a sample of classroom interaction via videotape or tape recording.

The unit of curriculum you choose may vary from a single lesson plan to a course outline with complete specifications. You also need not limit your example to the subject or topic area of your proposed curriculum. You may well discover an exemplary curriculum product outside of your field, outside of the age range or developmental level specified in your proposal, and perhaps outside of education conceived as an institutionalized schooling process.

In this sense there is no limit to the range of choices you have, provided they meet the two criteria stated earlier.

Presenting the Example

After selecting an exemplary curriculum product, you will have some choices as to how to present it in your proposal. Clearly the nature of the product chosen will in part determine how it may be transmitted, but given this constraint, you may still have several options. For instance, you may wish to present a written lesson plan, the lesson itself being taught (via videotape), or both. If you wish to analyze an educational environment, you might present a model, a photo, or floorplans. If you are presenting educational materials used by a teacher or by children, you might wish to send the actual materials, a catalogue including pictures or descriptions of the materials, or a videotape of children actually using the materials. You might provide a description of an assignment given to students, or the products of student efforts in fulfilling that assignment. In lieu of an actual film or filmstrip you might provide a detailed description as already indicated, or a transcript of the film's narration.

These examples are illustrative only; given the constraints imposed by the nature of the product and by your access to resources of time, money, and materials, the following general guidelines are suggested:

(1) Be as complete and detailed as possible. This may mean presenting the same product in several forms (for instance a floor plan plus a model) or presenting different aspects in different forms (for instance teacher's guide, student lesson plan, and materials used for demonstration, experiment, etc.).

(2) Provide a specific rather than a general instance of the curriculum product. In particular if you wish to indicate some aspect of the educational process, do so in as concrete a form as possible. This may include use of real examples taken from your experience, careful descriptions, etc.

(3) Use that medium which communicates the product in as graphic and immediate a form as possible. A picture is worth

Specifying the Example's Features

After you have selected a curriculum product and have decided on a mode of presentation, you must answer the question, "What do I like about this product?". As a group strategy you might want either to answer this question in a group session, or to compare responses arrived at individually. The latter approach has the advantage of pointing out potential areas of conflict, if individuals identify quite divergent features of the product. Such conflict may stem from certain ambiguities or contradictions in your platform, which you may then be in a position to resolve.

Be specific in identifying the salient features of your product. There is no maximum or minimum number of features to point out, but in general you will want to be thorough in specifying those aspects of the product which you consider excellent. As you approach this question, your thinking might be guided by two considerations. First, you may feel that an aspect of a curriculum product is worthy of notice in its own right: it is aesthetically pleasing, it brings pleasure or delight, etc. Second, you may single out a feature as important because it contributes to some desirable end such as might be represented by the objectives in a lesson plan, the goals of a unit, or the

ideals in your platform. For example, a particular feature might promote curiosity in the learner, provide the most efficient route to a learning outcome, etc.

Finally you might review any product under consideration for contradictions between that product and aspects of your platform. To take an obvious example, if your platform stresses student-initiated learning and your product represents an activity heavily dependent on teacher direction, a reassessment is necessary. Do not be overly alarmed at the appearance of contradictions, conflicts, or differences of opinion at any stage of the proposal writing or of the curriculum development process. Difficulties based on contradictions between different parts of a curriculum, on unexamined assumptions, or on conflicts between group members, attend the work of any curriculum planning group. The identification and resolution of such problems is a vital life sign of the group, indicating the extent to which group members have joined with the crucial issues, and are attempting to account for the full range of curricular contingencies. No agency expects perfection at an early stage in development. In fact, perfection would evoke suspicion.

To pursue this matter one step further, several responses to contradictions between example and platform are available to your group at this stage of deliberation. You might decide to reaffirm and further clarify platform ideas. This would mean finding another product more consonant with these ideas, or at least revising those aspects of your example that conflict with your platform. On the other hand, you might recognize that your example embodies ideas not adequately treated in the platform, to which your group subscribes.

Each of these results would require additions to, deletions from, or revisions of the platform. Each of these steps would be valuable if it represented the forging of stronger links between curricular principles and curricular products

For illustrative purposes, we conclude this section with several examples of salient features derived from curriculum products:

1. Product: a specific textbook

One Possible Salient Feature: questions at the end of each chapter that emphasize divergent as well as convergent responses.

2. Product: videotape of teacher behavior in directing a discussion.

One Possible Salient Feature: careful blend of questions whose answer requires a full range of cognitive response from factual statements to highly interpretive and synthetic replies.

3. Product: detailed plan for a teacher's inservice day.

One Possible Salient Feature: provides a teaching technique that all teachers may immediately put to use in the classroom.

4. Product: a learning environment.

One Possible Salient Feature: flexible spacing to accommodate a wide range of activities oriented to various sized groups and to individuals.

5. Product: a playground apparatus.

One Possible Salient Feature: general design which promotes a pleasurable, frustration-free experience for youngsters of all ages.

Providing a Rationale for Salient Features

Following the question, "What do I like about this curriculum product?",

you should address the question, "Why do I like it?". When you answer this question you are providing arguments in support of the salient features of your example. In this brief booklet we can only draw your attention to the importance of developing sound arguments, carefully reasoned, and internally consistent, linking the salient features with their presumed good effects or explaining why they are good in themselves.

It may be helpful to conceive of two broad principles: justification based on practical grounds, or on grounds of inherent worth, merit, desirability. Under the first principle come all arguments demonstrating that a particular feature is effective, efficient, economical, and the like in reaching some desired goal. Such arguments are primarily factual in that a definitive statement would rely on some form of empirical evidence. In fact, you may wish to cite factual results based on laboratory or field research, on survey information, on cost-benefit analysis, on task analysis, or on any other pertinent method. For example, the following are practical claims: the specified feature

- facilitates transfer of learning.
- improves the student's ability to manipulate small objects.
- provides an easy-to-administer and inexpensive method for grading papers.
- promotes task-oriented behavior in small groups.
- allows students an opportunity to choose materials they wish to work with.
- promotes creativity.
- creates conditions conducive to cooperation.

There are several points to note about these statements. They are

claims capable of being tested. Such claims may be written at several levels of specificity, and it may be the wisest course, when making factual claims, to be as specific as possible. For instance, you might specify further what creativity refers to and what promotes it. This of course is the purpose of behavioral objectives, about which little need be said. Note further that a factual claim may be made about a matter of value as well as a matter of fact. The claim that a feature of classroom interaction promotes honesty (a value) is capable of being tested. Finally, you may be assured that many, probably most, practical claims about features of any educational program have not been empirically tested. Most such claims represent hunches, intuitions, or plausible hypotheses based frequently on practical experience. Justification on such a basis may well be the best and only approach available for your group.

The second major principle refers to arguments justifying the inherent value or worth of a feature. In this case your claim will be based on some philosophic conception of the good, the true, the just, or the beautiful, and your task will be to show how, in what sense, and compared to what alternatives it is valuable.

There is another approach which might prove helpful to the task of providing a rationale for the features of your example. You may conceive of certain broad classes of factors from which to draw elements of your analysis. The basic frame of reference for each argument may be specified in relation to such classes of factors. Following is one possible list of such factors for your consideration:

1. Value Statements. Arguments based on the fulfillment of goals, ideals, ends, etc., or on the consistency of certain curricular features with such ideals.
2. Nature and Use of Knowledge. Arguments based on a conception of knowledge, of cognition, of mind, or of the ways in which different types of knowledge might be useful.
3. Nature of Teaching and Learning. Arguments using insights and evidence derived from theory and research on learning and teaching.
4. Psychological and Social Characteristics of Learners. Arguments based on certain typical features of the learners for whom a curriculum product is designed. Such features may be based on factors such as age, ethnicity, cultural background, geographical location, socio-economic status, etc.
5. Social, Economic, or Political Aspects of Society or Community. Arguments referring to broad community factors affecting the need for, development, implementation, and use of curricular features.

Arguments may be drawn up with reference to any or all of these factors.

A final caution is in order if you use this or another such scheme.

Reference to the "needs" of students, or to "needs" dictated by certain community or societal conditions imply two criteria for the application of the term "need": first that there should be some kind of norm, for example a standard of living, or the "proper functioning" of a thing. Second, there is the matter of fact that this norm has not been achieved, or could well fail to be maintained. The point here is that the term "need" conceals both a matter of fact and a matter of value each of which must be made explicit.



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